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1. Pre-organized Session Summaries – the overview describes the intent of the session and lists the abstract ID numbers for the included abstracts.
2. Abstracts with the pre-organized sessions
3. Roundtables
4. Workshops
5. Individual paper abstracts
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Track 1 - Technology, Society and Analytical Methods

Track 1 Pre-Organized Session Summaries and Abstracts for the Sessions

BROADENED APPLICATIONS AND ASSESSMENTS OF COMPUTER MODELS IN PLANNING
Pre-Organized Session 20 - Summary
Session Includes 299, 300, 301, 302, 303

In planning processes, computer simulation models are used to understand systems, evaluate potential effects of planning and policy interventions, and to interpret and analyze the effectiveness of plan/policy implementation. Models are frequently assessed on how realistically they represent processes, however, in collective problem-solving contexts, the process of building and deploying computer models introduces broader goals. For example, participatory modeling can support social learning, introduce creativity in problem and solution-space definition, and improve stakeholder communication for action. Further, while more complicated models may increase realism, they may be more difficult for stakeholders to interact with, preventing the adoption of this collaborative practice into a broader institutional framework. Participation and social learning may also result in unintended, undesirable consequences. This session addresses the social-political processes of computer model application in planning. The session will coalesce ideas about how computer models are used, and frameworks for how computer models ought to be assessed.

Objectives:

- The audience will learn about alternative ways to engage in and assess the effectiveness of collaborative computer modeling in planning

UTILIZATIONS OF COMPUTER MODELS IN ENVIRONMENTAL MANAGEMENT: THE CASE OF THE CHESAPEAKE BAY
Abstract ID: 299
Abstract within Pre-Organized Session 20

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Like many environmental management contexts, the management of the Chesapeake Bay watershed relies on the application of a scientific model to support decision-making. While many presume scientific models to provide “objective” data upon which to base decisions, however, when applied in regulatory contexts, scientific models are inseparable from the social and political forces that construct them and give them legitimacy (Oreskes, 2003). This can be especially true when policy actors and those who stand to directly benefit from or be influenced by the outputs of the model are involved in the way the model is applied. The participatory process of co-production of scientific research and modeling (participatory modeling or collaborative modeling), is often lauded as one way to ensure that scientific information is made maximally salient to those involved in the decision, to encourage social
learning across stakeholder perspectives, and to ensure representativeness in the decision-making process (Voinov et al 2018). However, at the same time, participatory processes and social learning could result in unintended consequences, such as over-legitimization of the model, gaming of the participatory process, or decreases in transparency due to scientific information being leveraged in opaque ways. Environmental planning has explored this area through research on collaborative planning support systems, how information is used in planning contexts, and the role of experts and learning in planning processes (Klosterman 2013; Hoch et al. 2015; Goodspeed 2016). In this research, I explore a key period of the development of the Chesapeake Bay Programs’ watershed model.

The Chesapeake Bay watershed model has been in development since the 1980s, and is considered by many to be an exemplary case of participatory modeling. I use documentary analysis and interviews with participants involved in the model application and development transition to reveal the political and tactical ways in which scientific models are “utilized.” This research suggests unintended or negative outcomes may be associated with both participatory decision-making and stakeholder learning even though they are so often touted as the benefits of participatory modeling. I also use a post-normal science (Funtowicz and Ravetz 1993) framework to discuss to what extent this case demonstrates differing expectations for how politics and science can or should be separated in environmental planning contexts. Lastly, I end with a hypothesis that further development of a theory of computer model governance to bridge model impact and broader theories of environmental governance at the science-policy interface may result in improved SES modeling outcomes.

Citations


Key Words: computer models, participatory modeling, social learning, environmental governance

REALIZING THE POTENTIAL OF COMMUNITY-LED, SCIENCE-DRIVEN MODELING FOR COLLABORATIVE PLANNING AND POLICY

Abstract ID: 300
Abstract within Pre-Organized Session 20

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Participatory modeling is a collaborative approach to formalizing shared representations of a problem and, through the joint modeling process, designing and testing solutions to that problem. This approach is particularly well-suited to address complex social and environmental problems like climate change, social and economic justice, and sustainable resource management, where interaction effects among multiple actors and factors make the causes and consequences of the problem unclear, and where a diversity of values and perspectives may lead to conflict about concrete pathways forward. Engaging in participatory modeling with different modeling techniques helps elicit diverse stakeholder knowledge (formal/informal, explicit/tacit, scientific/experiential) and harnesses this diversity to move from conflict to solutions. In doing so, this collaborative process strengthens relationship-building, empathy, trust, systems thinking, and collective agency for decision-making. In this paper, we present fora.ai, a software platform designed to enable participatory modeling and catalyze its impacts, focusing on the specific example of advancing community-led, science-driven solutions for climate resilience.

Recent discussions around research, professional, and funding agendas have re-surfaced the importance of knowledge co-production and ethical participation to address the tensions that are present in cities worldwide: the acceleration in urban growth and climate change, both of which are concentrated in and disproportionately impacting areas inhabited by socially vulnerable populations. Despite participatory modeling’s potential to address these tensions, it has yet to become a mainstream approach for planning and management, for several reasons. The approach must be heavily tailored to the characteristics and context of each planning problem, including the stakeholders engaged in the process. This requires long-term commitment, time, and funding, in addition to training in a broad range of skills (e.g., modeling, visualization, facilitation) and interdisciplinary and intersectoral collaboration. Most of the development of the practice has focused on modeling tools and engagement techniques, missing other necessary dimensions to further evolve and scale up participatory modeling for effective, impactful, and fair decision-making.

We seek to overcome the current limitations of participatory modeling by developing a platform (i.e., a set of organizational features, visualization and modeling tools, and facilitation and sense-making approaches) organized around all the iterative steps necessary in participatory modeling: from problem definition to preference elicitation, to collaborative model building and simulation, to deliberation of tradeoffs across solutions, to implementation. Effective use of this platform requires engagement and assessment to traverse the entire participatory modeling process to support collaborative exploration of the solution space and synthesis towards specific implementation strategies, and to provide the information necessary for evaluation and adjustment of the platform’s features, tools and approaches.

We extend prior work on fora.ai by providing initial evidence of its effectiveness when embedded in a broader stakeholder-led process that integrates diverse knowledge and values in pursuit of inclusive, equitable climate resilience. This work incorporates sensor data measuring micro-spatial inequities in exposure to flooding and heat into participatory computational modeling to support green infrastructure planning. Modeling with local environmental data allows communities to design green infrastructure solutions for their own context while immediately visualizing the impacts of specific hazards and considering the tradeoffs with other community priorities (e.g., affordable housing, accessibility). In this paper, we provide evidence of how our platform leverages the power of social complexity and contributes to social learning, creative solution-building and democratic decision-making for urban sustainability and climate resilience.

Citations

Community-led, participatory planning is presumed to be the most viable pathway for stimulating institutional transformations. However, the limitations of participatory planning have been well documented, and its inability to produce transformative change has likely contributed to the belief that participatory planning is a shallow, performative exercise designed to fulfill legal mandates and reproduce the status quo (Innes & Booher, 2004). One challenge, among many, is how participation can address the complexity of social and ecological systems and the tangled nest of institutional relationships that govern them (Healey, 2007). Rarely do participatory planning processes consider either the deep complexity of social and ecological systems (Zellner & Campbell, 2015) or the multifaceted nature of institutional governance. Even more rarely do they consider both simultaneously (Milz, 2021).

Designing participatory processes to promote social learning has shown promise for addressing this dilemma (Meléndez & Parker, 2019). Furthermore, equipping stakeholders with tools to simulate system complexity has shown promise for promoting collective learning, the joint exploration uncertainty, the consideration trade offs, and the formation of compromises. Stakeholders can learn to codify their proposed institutional changes, build scenarios that include packages of solutions, test their efficacy using the model, and adapt their approaches based on the outcomes. Nevertheless, analysis of social learning in participatory contexts has been stymied by a methodological dilemma. Most studies focus on either the deeper institutional changes of planning processes or on the micro-situational dynamics of participation. It is often difficult to connect the former to the latter in order to show how deliberative moments add up to systemic change. To address that gap, we have developed a set of methods for assessing social learning in participatory planning that spans institutional layers for the purpose of building empirical pathways between them. Paired with an innovative modeling platform, we set out to discover how non-expert stakeholders learn through interactive deliberation using the platform to propose, test, and then adopt transformational changes in their community.

Here, we report findings from the first year of a multi-year study in the Blue Hill Avenue Corridor in Boston, Massachusetts. This project focuses on the design of a green infrastructure network to address micro-spatial environmental inequalities that plague the area and disproportionately impact neighborhood residents. Community leaders and citizen stakeholders were invited to participate in a series of mapping and modeling workshops to co-design a green infrastructure plan. Across the workshops, we tracked the evolution of participant learning using key-informant interviews, video records of planning workshops, and by observing how the
participants interacted with the modeling platform. Our findings show how community members considered fine-grained information about the environmental conditions in their neighborhood in order to identify a green infrastructure plan that both responded to their needs and addressed the environmental impacts of development. Moreover, their work is contributing to ongoing conversations with civic leaders about the scale of changes in their neighborhoods and the most effective ways to create a thriving community. In other words, the participants are using the tool and their collective deliberations to propose lasting institutional change. This paper will discuss our initial findings and describe their implications for the future of this ongoing project and for the practical routines currently used for participatory planning.

Citations


Key Words: Participatory Planning, Agent-based Modeling, Social Learning, Environmental Justice, Green Infrastructure

GEOSPATIAL MODELING FOR SUSTAINABLE CITIES INTEGRATING GEODESIGN AND SCENARIO PLANNING
Abstract ID: 302
Abstract within Pre-Organized Session 20

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The cities of the future are sustainable, smart, and inhabited by happy and joyful people. How can we reach such a happy future and how can we design it with the help of geospatial data and technologies? Research presented in this work is based on the fundamentals of scenario planning (Avin 2012, Hopkins and Zapata (eds.) 2012, Goodspeed 2020), geodesign framework as initially suggested by Steinitz (2012) and experimentally implemented in several study cases (Rivero et al. 2020), and innovations for the future. In 2018 an initiative called International Geodesign Collaborations (IGC) was initiated that brought over 90 universities together to study the implementation of Steinitz’s (2012) Geodesign Framework. Fisher at al. (2020) collected the study cases presented at the first gathering in Redlands, CA in 2019 and published a book with their descriptions. This event was associated with the regular yearly Geodesign Summit organized by the Environmental Systems Research Institute (ESRI). It brought geospatial and geodesign researchers together and encouraged universities to collaborate on future projects.

As members of the IGC network, faculty from the University of Georgia (UGA) and Iowa State University (ISU) decided to test a novel combination of scenario planning, geodesign framework and innovations to see how a combined workflow may enable students to experiment with geospatial data and tools and develop scenarios for the sustainable futures of a city using geospatial software. The city of Ames, Iowa was selected due to one of the universities (Iowa State) being located in this town. The future scenarios concentrated on 2035 and 2050 as initially
suggested also in the IGC approach. The research methodology utilized in both classes consisted of the following five major steps: getting to know Ames, geodesign evaluation models, innovations and their implementations in group scenarios, impact matrix, negotiations and final scenarios. All steps have geospatial models associated with them.

The main results of this research include the following elements:

Maps of the existing infrastructure of the three systems of the City of Ames: transportation and mobility, energy, green infrastructure
Suitability analysis for further expansion of the three systems
A collection of innovations in all three systems
Three scenarios 2035 and 2050 by ISU and two scenarios by the UGA
Negotiation process and associated Impact Matrixes
ISU final scenario
UGA final scenario

This collaborative, multi-institutional and interdisciplinary class project enabled the collaborating universities UGA and ISU to meet, discuss and exchange online and in person. It additionally motivated students to accomplish high quality work that was reviewed by the peers of the collaborating institutions. The same methodology was used in both; the studio (UGA) and the class (ISU). A few challenges that can be mentioned include the following: lack of methodology for evaluating impacts of the scenarios, lack of software tools that would enable to evaluate the impacts, planning for the city that is not known to one of the groups (UGA in this case). The challenges at times were greatly compensated by the use of available mapping viewers and data, inspirations during brainstorming and presenting sessions and especially joyful meeting in person on Ames. In the future we hope to establish clear and unified visualizations for all collaborative groups, have more time for the negotiations, and work on more sophisticated methods of measuring the impacts. Learning throughout the whole semester has been inspiring. Highly motivating and innovative and we would do it again.

Citations


Key Words: scenario planning, geodesign framework, innovations, geospatial data, geospatial models

FROM TRANSIT NEWBIE TO TRANSIT PLANNER & MODELER THROUGH SOFTWARE: THE CASE OF UMASS STUDENTS & THE PVTA

Abstract ID: 303
Abstract within Pre-Organized Session 20

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Prior research in planning suggests that computer models and software can assist in scenario planning, community engagement, and the development of social learning among participants. Pedagogical research also suggests that when studio courses are designed to facilitate social learning among students and oriented towards practical and applied challenges in the planning field, they are successful in achieving stated learning objectives. This paper presents the findings from an evaluation of a two-year studio course at the University of Massachusetts, Amherst. During the Fall of 2021 and 2022, approximately 34 students were enrolled in a transit-focused studio that integrated scenario planning, equity planning, and computer modeling software. Students used computer models to conduct scenario planning and produced a set of four scenarios, each of which included a redesigned fixed-route transit system, and a set of metrics to evaluate how well the redesigned transit system increased access, efficiency, and equity. These computer models have enabled the students to explore and analyze different potential scenarios and consider their implications. The use of computer models allowed the students to gain a deeper understanding of the potential outcomes of their transit redesigns.

The research questions presented here: does the use of computer modeling software inhibit the achievement of stated learning objectives? And, to what extent does the use of computer modeling software elevate discussions of data ethics, privacy, and equity issues? were addressed through a review of studio deliverables, student reflections provided through written journal entries, peer evaluations, and student interviews. This research presents an argument for the use of models in a graduate studio, while interrogating the extent to which the models obfuscated dimensions of transit planning that are critical to the production of an effective transit design. Collectively, we found that the integration of these subfields in planning (transit design, scenario planning, community engagement, equity analysis) was made possible through the use of computer models, but that the rigorous demands of the studio course (modeled after “real world planning projects”) also meant that students did not fully consider how the computer models failed to represent reality. Finally, the research concluded that the use of computer models in scenario planning is an effective way to engage students and provide them with the skills needed to engage in decision making across a variety of planning subfields in the future.

Citations


Key Words: transit, equity, social learning, computer models, pedagogy
As cities continue to grow and evolve, it is becoming increasingly relevant to use computational tools to gain insights into urban systems and inform decision-making. The session will start with a paper questioning whether contemporary planners possess the expertise to deal with policies that require new methodological challenges and how necessary it is for a planner’s toolkit. The following paper encourages planners to collect data from public sources to better monitor and analyze urban conditions by providing guidelines to properly utilize computational methods in their analysis. The discussion will follow with the evaluation of the platform Spatial Equity NYC, to foster data transparency and offer policy solutions. Next, the discussion will veer into the application of location-based data to analyze the mobility of street vendors and how it impacts public space governance in Mexico City. Lastly, the session will end with the assessment of consumer reference datasets for measuring residential mobility in King County, Washington and the spatial and social biases of these data.

Objectives:

- Discuss computational urban analytics

**USING LOCATION-BASED DATA TO UNDERSTAND THE GOVERNANCE IMPLICATIONS OF STREET VENDORS’ LOCATION IN MEXICO CITY**

Abstract ID: 559
Abstract within Pre-Organized Session 29

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In recent years, travel behavior research has focused on studying urban mobility dynamics at a larger scale, providing a detailed understanding of how people move within a city, improving transportation planning and policy, and addressing social equity concerns. However, these studies usually do not incorporate workers of the informal economy and do not analyze how these movements might impact urban spaces at a large scale. Although street vendors are the most visible form of informal work, little is known about their daily mobility patterns and how their movement affects their relationship with vendor organizations, street level bureaucrats, and local elected officials. Thus, to identify these conditions, I ask what are the daily mobility patterns of vendors and how do these patterns impact the governance of street markets they work in?

In this article, I study the travel behavior of street vendors from tianguis, pre-colonial open-air street markets with vendors selling on a specific day of the week in a designated location of Mexico City. Although previous research has focused on governance of street vendors state, little is known about vendors’ mobility and the implications this has on the neighborhoods they work in. Therefore, the goal of this study is twofold: 1) to analyze the travel behavior of tianguis’ vendors between their home and work locations at a large scale and 2) to understand how the residential proximity of vendors (i.e., if they live and work in the same neighborhood) impacts the governance of tianguis and how public space is regulated.

Using the location of tianguis in Mexico City, I use Location-Based Services (LBS) data to capture people coming into the region of interest (tianguis) to identify them as vendors. Having identified these devices as vendors, I then identify their home location and their mobility patterns across the city. Through this analysis, I identify the percentage of workers that live within the same neighborhood in each tianguis, allowing me to further examine if local workers gain greater political leverage to remain in place through 1) stronger community networks as a more cohesive group or, 2) by having a stronger clientelistic relationship by being part of the local politicians’ jurisdiction.

This project engages with a broad debate on the entanglements between street vendors, civil associations, and the state. Most of this literature has studied street vending governance and how vending associations negotiate with local city officials. These theories have focused on the variety of stakeholders involved in the management of
public space but have not included extensively the effects that residential proximity and the fragmentation of street vending associations has over the physical control of public space in specific worksites.

This project sits at the intersection of economic geography, political science, and urban studies and aims to bridge these fields, complicating clientelist narratives of street vending by studying how the dynamics of people working and living in informal settings shape political arrangements that are manifested in public space. In particular, it contributes to the understanding of transportation planning, urban analytics, and urban governance by analyzing the intra-urban inequalities of cities of the global south.

Citations


Key Words: Urban governance, Mobile data, Street vending, Fragmentation, Mexico City

COMPUTER-ASSISTED METHODS FOR THEMATIC CODING OF LARGE-SCALE TEXT DATA IN URBAN PLANNING

Abstract ID: 560

Abstract within Pre-Organized Session 29

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As digitalization grows, urban planners can utilize data from novel and often unexpected sources. Collecting data from public sources, including social media or online platforms, can drastically expand planners’ ability to monitor and analyze urban conditions in near real-time. Large-scale text data, for instance, can shed new light on evolving social processes. However, traditional manual methods of analysis quickly become infeasible when facing the enormous volumes of unstructured text-based digital content now available. Researchers and practitioners across disciplines have thus increasingly turned to computer-automated or -assisted methods, such as natural language processing (NLP). Yet, the applications of such methods—as well as questions around benefits, challenges, and trade-offs—remain poorly understood.

How can urban planners capitalize on recent innovations in large-scale text processing to better monitor and analyze urban conditions? This paper proposes and validates new methods for identifying themes in unstructured, human-generated text-based urban data. We compare approaches ranging from fully manual to fully computer automated through NLP to measure their ability to capture context-informed underlying topics in a feasible amount of time. We operationalize this approach through a case study examining exclusionary language in housing ads. Drawing on 90,000 online rental listings in Los Angeles County, we hand-code a sample to identify themes in short-form text and outline the limits to manual methods’ feasibility in the face of large unstructured data. Next, we assess the manual process against several alternate, automated approaches, including fully automated unsupervised NLP, measuring both the level of agreement between the determined clusters and those manually generated and the cohesiveness of the determined topics. Finally, we introduce a novel, manual coding-assisted
NLP method, which combines the strengths of both qualitative and machine-based text data analysis and can be evaluated through accuracy testing: we manually code a sample of the text data and employ it as training data for a supervised NLP model used on the full set.

Our results reveal that although the automated approaches offer greater processing feasibility, the level of agreement with the manual themes for two common methods, k-means clustering and latent dirichlet allocation (LDA) is only 45% and 36%, respectively. However, the manual-assisted NLP method, while still computationally efficient, offers higher levels of agreement (64%). Additionally, manual-assisted NLP can identify thematic statistics on the full set as well as spatial correlations with the themes. In our housing listings case study, for example, this method enables us to discover broad trends of exclusionary language relating to ad characteristics like location and rent.

This paper offers three primary contributions to urban planning research and practice. First, it advances the growing literature on computer-based methods, such as NLP, for thematic coding of urban data. While NLP often seems attractive when facing large unstructured text data, there are contexts in which other methods are better-suited. Although several recent studies apply computer automated methods to a variety of planning issues, a clearer accounting of such approaches’ suitability is sorely needed. Second, this paper identifies for planning scholars specific guidelines for text processing methods of varying levels of automation depending on the size of the dataset and the nature of the research question. Third, this paper proposes a solution leveraging the nuance and contextual understanding generated through manual qualitative coding as well as the efficiency and power of automated language processing techniques. As digital exhaust continues to grow and find relevance in the field, planners will need to look to guidelines and best practices for properly utilizing efficient methods like NLP.

Citations


Key Words: urban informatics, natural language processing, computational methods, text processing, qualitative methods

“SHOULD YOU JUST LEARN TO CODE?” AN ANALYSIS PLANNING JOB ADS

Abstract ID: 561
Abstract within Pre-Organized Session 29

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Contemporary planning practice is facing an environment where new methodologies around data science and analytics, as well as new policy areas, such as autonomous vehicle management or “Smart City” policies are coming to the fore. There is a question for planning academics as well as practitioners as to whether contemporary
planners possess the methodological sophistication or subject matter expertise to meet these challenges. But there is a preceding question that remains relatively understudied—do planners need to actually know these things? One way to explore the question of what planners should know is to examine what employers are demanding of their hires. Using a dataset of over 16,000 job ads from the American Planning Association we examine the demand for “data science” and analytics skills, specifically, in order to determine to what extent planning employers need, or want, more technically sophisticated planners. Our initial results show that while there is a demand for certain “data science” skills, there is considerable overlap with traditional planning methods such as GIS and spatial analysis, but we do find demand for “newer” skills such as Python or “data management”, and that the proportion of ads requiring more advanced analytics skills is relatively small, but emerging.

Citations


Key Words: labor markets, pedagogy, text mining

MEASURING RESIDENTIAL MOBILITY USING CONSUMER REFERENCE DATASETS

Abstract ID: 1068
Abstract within Pre-Organized Session 29

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The study of residential mobility and neighborhood change has traditionally been constrained by a lack of sufficiently detailed longitudinal data. Data for research on residential mobility has historically been limited to small-scale longitudinal surveys such as the Panel Study for Income Dynamics (PSID), the New York City Housing Vacancy Survey (NYCHVS), or administrative datasets (e.g. Freeman 2005). While these surveys each have important strengths, they have traditionally limited in both scale and scope, and limit the ability of researchers to detect robust patterns of mobility at the scale of entire populations. Several recent studies have sought to address these limitations by employing novel consumer reference datasets intended to contain longitudinal observations for a near-census of the population (Greenlee 2019; Diamond et al. 2018; Chapple et al. 2022).

Despite their increasing popularity as a research tool, the representativeness of these consumer reference datasets for residential mobility research remains to be assessed. This paper seeks to address this gap in the literature through an analysis of two consumer reference datasets that are increasingly employed in various academic research contexts. In comparing these two datasets with American Community Survey (ACS) estimates at the county- and tract-levels for a single large county, we use econometric and machine learning techniques to answer the following questions: First, to what extent do each of these datasets under- or over-represent particular social groups, as defined by race, socioeconomic status, tenure, and marital status? Second, are there any systematic biases in the spatial representativeness of these two datasets across neighborhoods defined by
differing demographic characteristics? Finally, how might these datasets be employed to reliably measure the residential mobility patterns of specific social groups?

In order to analyze the representativeness of these datasets and their imputed demographic variables, we examine individual and household records between 2015 and 2019 within a single county, King County, Washington. We select King County as a case study for multiple reasons. With a total population over 2 million, King County is one of the largest counties by population in the United States. The county is also relatively diverse geographically, racially, and economically.

Residential mobility has long been a focus for planners and policymakers. Residential moves have implications for individuals and households as well as neighborhoods, cities, regions, and society: life outcomes are shaped by neighborhoods and residential location, and in turn residential moves shape communities and regions (Clark 2005). This paper provides important insights into the use of consumer reference datasets to analyze residential mobility.

Citations


Key Words: Residential mobility, Displacement, Data measurement, Big data

SPATIAL EQUITY NYC: USING OPEN DATA TO REVEAL SOCIO-SPATIAL INJUSTICES IN NEW YORK CITY
Abstract ID: 1346
Abstract within Pre-Organized Session 29

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New York City, as with many cities, struggles with social inequalities and an unequal distribution of spatial amenities and healthy public space. Although New York City provides access to a multitude of open data sources that may expose spatial inequities, most of these datasets are inaccessible as they are in raw formats and are illegible without prior data literacy. This paper examines the impact of Spatial Equity NYC, a publicly-accessible digital platform that seeks to foster data transparency and increase data literacy through visualizing transportation, health and environment data in an easily navigable tool that reveals spatial inequities and offers spatial and policy solutions. The platform displays fifteen spatial data metrics visualized in relation to demographic data, shown by both city council and community board boundaries. The platform offers policy-makers and community board leaders the ability to explore the data through maps and histograms, and discover solutions.
related to specific inequities. Spatial Equity NYC is evaluated through user observation and interviews with city councilmen and community board representatives to learn how they used the tool. Interview questions sought to answer how the tool was used to learn about socio-spatial inequities and whether those insights had an impact on policy. The findings show that in making data more accessible and legible, we are able to inform policy decisions that impact the everyday lives of New Yorkers.

Citations


Key Words: Spatial Equity, Open Data, Climate Change, Spatial Analysis, Visualization

EXPLORING THE INTERSECTION OF BIOMETRIC SENSORS AND URBAN RESEARCH
Pre-Organized Session 75 - Summary
Session Includes 796, 817, 819

Biometric sensors like eye tracking glasses, GSR sensors, and heart rate trackers are used in various domains such as health, marketing, education, and sports to gain a more objective and detailed understanding of human behavior. Recent advancements have made these sensors more portable and affordable, allowing researchers to integrate them into naturalistic experiments in urban studies. This allows for a systematic understanding of how people respond to different aspects of the urban environment. However, challenges exist, such as collecting and analyzing vast amounts of data and addressing ethical and privacy considerations. This session is organized to showcase the potential of biometric sensors in addressing critical transportation inquiries, such as travel satisfaction for active travelers, public perception of various street interventions during the pandemic, and safety design while discussing challenges in their use. The session will highlight how biometric sensors can provide objective and detailed data on how people experience and interact with the travel environment to make them more inclusive, accessible, and comfortable for all users.

Objectives:

- The potential of using biometrics sensors in transportation studies
- The challenges in integrating biometrics sensors in urban studies

FROM ATTENTION TO BEHAVIOR: INVESTIGATING THE PHYSIOLOGICAL-COGNITIVE DIMENSIONS OF STREET INTERVENTIONS
Abstract ID: 796
Abstract within Pre-Organized Session 75
As people move through city streets, they are exposed to an array of stimuli. Attention is directed towards a myriad of cues including people, signage, vehicles, buildings, vegetation, advertisements, and other visual features of the environment, while auditory stimuli such as a yell or a car horn elicit directed visual response. Whether perceived as harmonious or chaotic, the urban street environment is a critical component of societal functions including access to destinations, interpersonal interactions, and economic activity, all in a safe manner. Street interventions, such as the conversion of automobile streets to multimodal spaces, can help address planners’ objectives to foster safe, accessible, and livable urban streets. While central to planning intent, empirical research on how different street configurations are directly experienced by individuals, and how those physiological and cognitive experiences may be associated with preferences and behavior, remains little examined.

How does individual attention and perception change between automobile-centric and repurposed, pedestrian-only streetscapes on a commercial street that temporarily limits vehicle access? Closures of the main commercial corridor in the city of Staunton, Virginia on selected days allow for a quasi-experimental approach, examining differences in open and closed street configurations while holding other aspects of the built environment relatively constant. This represents an opportunity to examine the differences in human physiological and cognitive responses to a range of stimuli along the same corridor. Visual behavior is closely associated with underlying cognitive processes like attention and arousal, and ultimately these perceptions shape short- and long-term travel decisions. Until recently, studies on visual behavior as it relates to the built environment were only possible in laboratory settings, mostly due to technological constraints and the complexity of monitoring tasks in their natural environments. Mobile eye tracking technology allows researchers to identify which urban streetscape elements capture individuals' attention, giving insight to how people perceive their surroundings while traveling. Integrating mobile eye tracking glasses, heart rate sensors, and pre- and post-surveys of stated behaviors and preferences creates a methodology to use physiological and survey data to better understand how pedestrians respond to changes in urban infrastructure design.

The results reveal differences in attention across the participants when the streets were open and closed. The largest shifts were that the attention to people, both other pedestrians and patrons, increased in the closed-to-vehicles environment. In addition, physiological responses are focused in areas associated with mobility “transitions,” such as block ends. The overall findings contribute to an emerging framework for understanding how variations in attention and stimuli on urban streets may be associated with stress, preferences, and behavior. Further research is necessary to make connections among attention, perception, cognition, and the behaviors that impact mobility choices and economic activity on urban streets. Still, the methods utilized in this study have the potential to allow planners, and others to understand how their efforts to alter urban streets might impact physiological and cognitive dimensions of everyday travel.

Citations

EXPLORING THE STATE OF THE ART IN USING EYE TRACKING DEVICES IN NATURALISTIC AND QUASI-NATURALISTIC CYCLING EXPERIMENTS

Abstract ID: 817
Abstract within Pre-Organized Session 75

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Over the past decade, a growing number of studies have utilized mobile eye-tracking devices to understand cyclists’ gaze patterns and travel experiences. These studies have provided valuable insights into safety-oriented infrastructure planning and expanded the knowledge base on cyclists’ behaviors. This paper aims to explore the existing eye-tracking research in naturalistic and quasi-naturalistic cycling experiments, focusing on three main areas: 1) cycling experimental design and the selection of gaze behavior measurements with respect to study objectives, 2) environmental and human factors that influence cyclists’ gaze pattern and stress level and 3) identify research limitation and gaps that merit future research endeavors.

A systematic search of three databases (i.e., TRID, Science Direct, and Google Scholar) is conducted using keywords such as “eye tracking” and “cycling.” A total of 25 articles meeting the inclusion criteria are included. The result suggests that the generalizability of the studies is improved with more realistic experiment settings (e.g., cycling indoors vs. cycling in mixed traffic) and increased sampling sizes (i.e., from 5 to 50 participants). Cycling route designs (e.g., length and types of built environment included) vary by research objectives and participating human subjects. In terms of gaze metrics, eye movement-related measurements (e.g., horizontal or vertical gaze distributions and gaze entropies) are typically used to measure cyclists’ mental workload and stress levels; measurements related to the Area of Interest (AOI i.e., zones and objects being focused on) are used for understanding visual search patterns and hazard detection. Finally, we found that built environment variables (e.g., pavement, traffic, bike infrastructure) and cyclist capacity variables (e.g., age, experiences, alertness) impact cyclists’ gaze behaviors and stress levels.

There are several research limitations and gaps that invite further investigation. First, there is a lack of a systematic framework to guide the selection, development, and interpretation of gaze metrics. Additionally, the relationship between cycling stress measured using gaze metrics and that measured by other physiological sensors, such as Galvanic Skin Response (GSR) sensors and heart rate trackers, remains unclear. Finally, despite the utilization of AOI-based metrics in many studies, it is often considered time-consuming to develop and challenging to replicate. Therefore, there is room for augmenting these measures using the latest computer vision algorithms.

Citations

Understanding how travel environment may influence active travelers' stress level has important implications for safe and inclusive transportation system design. The latest wearable biometric sensors can enhance understanding of active travelers' travel experiences through collecting objective travel behavior data (e.g., Caviedes & Figliozzi, 2018; Ryerson et al., 2021). However, few studies have systematically examined the validity of using various biometrics sensor measures (e.g., eye-tracking gaze pattern, skin conductance levels, and heart rate variability [HRV]) to quantify travel stress/satisfaction across different active travel modes (Bigazzi et al., 2022). To address such a research gap, we conducted naturalistic active travel experiments for pedestrians, cyclists, and e-scooter users to examine how to leverage biometric measures collected using different sensors to capture travel stress/satisfaction more robustly.

Specifically, we are collecting biometrics data from three series of naturalistic travel experiments by asking participants to walk, bike, and ride e-scooters along pre-defined routes on Rutgers College Avenue campus, while wearing a Tobii 3 eye tracker, a shimmer Galvanic Skin Response (GSR) sensor, and a Garmin Forerunner 935 watch. The walking route is 1.1 miles long (~30 min walk) and the cycling and e-scootering route is 2.5 miles in total (~25 min ride). The travel routes are designed to include road segments with diverse urban greenery characteristics, shading, land uses, biking infrastructures (e.g., protected bike lane and mixed traffic lanes with varied traffic volumes), and sidewalk conditions. We also ask participants to complete an onsite survey after field experiments to collect information regarding travel stress/satisfaction levels, travel habits and capacity, and demographics. We then synchronize the collected sensor data and derive gaze patterns (e.g., gaze variability, fixation durations, area of interest, and pupal dilation), GSR level, and HRV variables to explore their associations with the reported travel stress/satisfaction level.

Preliminary results extracted from existing collected sample data (one sample for each examined mode) suggest that triangulating measures derived using different biometrics sensors might help capture travelers' stress/satisfaction more effectively (i.e., align better with their reported stress/satisfaction levels) compared with existing single sensor-based measures. For instance, the walking and cycling experiment data suggest that GSR and HRV are less accurate when intensive physical activities are involved. Gaze-based measures are not constrained by the level of physical activities, however, can be influenced by street shading and sun light direction. We will develop statistical models once more data are collected in the summer (~30 participants for each examined mode) to systematically examine how reported travel stress/satisfaction is correlated with gaze patterns, skin conductance level, and HRV across active travel modes to allow planners to identify locations and circumstances where travel experiences need to be improved. This on-going naturalistic data collection effort also demonstrates potential challenges for conducting urban studies using biometric sensors, such as IRB approval, experiment...
administration, large sensor data analysis, and privacy and ethical concerns.

Citations


Key Words: Biometric Sensors, Eye Tracking, Galvanic Skin Response, Heart Rate Variability, Active Travel

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**Track 1 Roundtables**

**HUMAN MOBILITY DATA: POSSIBILITIES AND PITFALLS FOR INFORMING POLICY**

Abstract ID: 326
Roundtable

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Our current measures of mobility, typically using static survey instruments such those produced by the Census - lack the capacity to describe a spatiotemporally fuller and geographically granular condition that is reflective of our day to day activities. Human mobility data - records from cell phone locations - has the potential to shed new, empirical light on the daily activities (Jiang et al., 2016; Kwan, 2013), how people move through neighborhoods, whether they have the potential to interact with one another (Jones and Pebley, 2014; Xu, 2021; Sevtsuk et al. 2022), and how they access urban services and destinations and respond to disasters like a global pandemic (Kang et al., 2020). New measures of segregation, social interaction, and mobility are not only important to researchers, but can change how policymakers and practitioners understand housing and social segregation, neighborhood opportunity, multimodal transportation choices, climate-related migration, and the impacts of land use and place-based policies.

This panel discusses and highlights the following questions: What are the current opportunities and promises in human mobility data for planners to plan sustainable, just, and resilient cities? What crucial questions of bias and privacy need to be addressed first? This panel aims to address the technical, legal, and policy questions surrounding the use of mobility for planning practice.

Citations


Key Words: human mobility data, big data, housing policy, land use, neighborhood change

ACSP-AESOP: PERSPECTIVES ON TRANSPARENCY AND ACCESSIBILITY OF PLANNING DATA INFRASTRUCTURE - FROM PLANSEARCH TO NATIONAL ZONING ATLAS TO CORINE LAND COVER DATABASES
Abstract ID: 1027
Roundtable

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Plans and zoning maps are often sequestered on the individual webpages of local jurisdictions, complicating efforts to assess planning outcomes in aggregate, compare plans for inspiration in drafting updates, or monitor ongoing promises. Ultimately, adopted comprehensive plans commit the local government to long-term zoning, financing and development goals that guide the fortunes and health of the jurisdiction for the next ten to forty years. The lack of easily accessible data and oversight often causes even the loudest advocates of plans and planning to sometimes lament that the plan as a document is ineffectual. Nevertheless, their content represents years of considerable community input through participation in advisory committees and public meetings. Plans can also legally obligate local jurisdictions to act. To empower communities to make more informed plans and provide greater accountability for created plans, this roundtable discusses recent efforts to foster public planning data infrastructure.

Join ACSP and AESOP representatives as we highlight several research approaches to creating large planning datasets. For example, Plansearch.caes.ucdavis.edu allows users to search across 58 county and 484 city general plans in California. Users can note that while nearly every plan mentions the term “golf course”, the term “climate justice” is rarely mentioned. Such efforts open greater opportunities for natural language processing and rapid plan evaluation. Similarly, the National Zoning Atlas represents a multi-state effort to stitch together the zoning maps of local jurisdictions with the primary objective of understanding where single family zoning spurs segregation. Such efforts help provide accountability for local jurisdictions. In Europe, the European Union INSPIRE Directive (2007) establishes data infrastructure standards with implementation rules as well as a data sharing platform. Such efforts build on earlier spatial data products like the CORINE Land Cover database initiated in 1985, and enable comparison of existing land-uses with planned development. While ongoing, there is currently no data infrastructure for the text contained in plans through the INSPIRE effort.

Questions for this roundtable discussion include: what are the top priorities for planning data infrastructure? In the non-federated and unmandated climate of the United States, which approaches may hold more promise than those in Europe? As larger datasets open greater opportunities for machine learning, what precautions might need
to be taken? What promise do these datasets hold for influencing policy and public decision-making, and training students of planning and policy? In sum, we note that the current lack of accessible data is a critical barrier to coordinated approaches that address justice in land-use planning. At the same time, the smorgasbord of local climate justice policy approaches at the local level provides fodder for local efforts elsewhere.

Citations


Key Words: zoning, climate justice, plan evaluation, Big Data

URBAN DATA SCIENCE IN PLANNING

Abstract ID: 1216
Roundtable

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Urban communities in the 21st Century have increasingly transitioned into complex systems and systems-of-systems, consisting of many dynamically interdependent human, environmental, and technical systems. Simultaneously, advances in Information Communication Technology have been accompanied by social innovations, which continues to drive the techno-centric versus human-centric debates. Rapid growth in urbanization and intensive urban-rural interaction enables massive flows of virtual and physical elements. At the same time, an increasing number of extreme weather-driven urban hazards are a significant source of biodiversity loss, social disruption, and economic disparity, threatening the United Nations’ 17 Sustainable Development Goals. This is an opportune time to explore how Urban Data Science should function and thrive in the context of planning, and vice versa, through a roundtable discussion of planning researchers.

Citations


Key Words: urban data science, artificial intelligence, planning
As many planning educators have experienced, desktop GIS software (whether ESRI's commercial ArcGIS suite, open-source alternative QGIS, or other applications) is not always the best tool to acquire, analyze, and represent spatial data about cities and urban regions, or to scale workflows up for collaborative projects. Writing scripts in Python or R can be more powerful and efficient approaches, but can have significant learning curves for students and technical challenges for instructors compared to a traditional GIS lab. In a setting where students are all working on their own computers, inordinate amounts of time can be spent on ensuring a harmonized technical stack for the whole class. Managing your own Python environment and libraries can be a headache on its own, but scaling that to a group of 20 or more students across a variety of machines and operating systems can quickly spiral out of control.

This 90-minute professional development workshop will demonstrate how using Google Colab interactive Python notebooks (essentially Google-hosted Jupyter notebooks) can help to solve this problem for planning educators, based on a graduate course the instructor recently developed and taught at the graduate level for city planning students. In the course, students used the Python language (and popular geospatial libraries including geopandas, osmnx, and folium) to acquire and clean real urban data, join attribute data to geometries, generate high-quality maps and charts (both static and interactive), conduct spatial statistical and network analyses, export maps and data to use elsewhere. In their final projects, these students, many of whom had little or no prior experience with coding, built their own hosted websites with embedded static and interactive maps on research topics of their choosing, from the urban zoning and retail implications of last-minute delivery "dark stores" to identifying clusters of underground arts events over time in New York City.

Over the course of this 90-minute workshop, participants will learn how to set up geospatial workflows in interactive Colab notebooks, pull in data files stored on Google Drive, external websites, or accessed via APIs, and publish interactive Folium maps to the web (our class used GitHub Pages since this allows for free web hosting, and has the additional benefit of introducing students to the GitHub community of practice). In addition to formal courses, this method can come in handy for research collaborations, especially with rotating and geographically far-flung personnel who have varying levels of familiarity with programming; we will also discuss several ongoing research projects that the instructor has adopted this workflow for.

Participants will not be required to have previous Python programming experience or more than rudimentary familiarity with mapping and spatial analysis, and the only required technology is an Internet-connected laptop computer. The format for the workshop is as follows: we will start with a brief introduction and overview of the tools we’ll be using and the reasoning behind their introduction, to be followed by approximately an hour of interactive demonstration of the kinds of workflows and pedagogical techniques this approach enables. We will conclude with an exploration of several examples of student work created over the course of the semester-long course mentioned above, and leave time for questions at every stage along the way.

Citations

Property taxes are an important financing mechanism for urban services and public infrastructure towards promoting accessibility and sustainable development (Medda, 2011). Calculating taxes is dependent on an analysis of multiple factors which determine property pricing, such as location and numerous built characteristics, a process often cumbersome for government departments (Carranza et al., 2022). Advancements in machine learning algorithms have enabled more automated steps for mass appraisal of urban land values by detecting patterns and estimating values to help decision-making (Wang & Li, 2019). Given such possibilities, we built on the predictive power of machine learning to contribute to planning and real estate literature by investigating to what extent urban accessibility plays a role in predicting market-rate property values. Accessibility is defined here as the ease with which people can reach urban services within a given time, the concentration of opportunities, and considering a specific mode of transport (Yang et al., 2020). Looking at accessibility as a taxable public good means placing it as a driver of social gains, sustainability and spatial equity (Webster, 2010). The goal was to create a model that could accurately predict apartment values for the city of Fortaleza in Brazil, where data was available for a sample of 92,265 apartments. As a methodology, we calculated 6 accessibility indicators following a methodology developed by the Institute for Economic Research and Strategy of Ceará (IPCE), which represent access to opportunities within a given time using public transport (Pereira et al., 2022). We employed quantile random forest, a non-parametric, tree-based ensemble method, to test the performance of accessibility measures and compared results by testing whether the model with accessibility was better that the one currently used by the Department of Finance of Fortaleza. We compared results from both models by comparing their Median Average Percent Errors. We find that accessibility to jobs and to health are determining factors, especially the number of health establishments that people are able to access in a commuting time of 60 minutes by public transport. As such, the results show that accessibility by public transportation is a key factor in the mass appraisal of property values, especially in Global South cities such as Fortaleza with a large variation of property values and typologies. It strengthens the importance of using computing tools to assist in complex problems such as land value recapture and resource distribution.
• Pereira, R. H. M. et al. (2022) Estimativas de acessibilidade a empregos e serviços públicos via transporte ativo, público e privado nas 20 maiores cidades do Brasil em 2017, 2018, 2019. Texto para Discussão. Ipea - Instituto de Pesquisa Econômica Aplicada. Available at:

Key Words: Machine Learning, Real Estate, Appraisal, Accessibility

DISCOVERING INEQUALITY IN GREEN SPACE EXPOSURE FROM STREET VIEW IMAGES: A CASE STUDY IN 25 SMALL- AND MEDIUM-SIZED CITIES IN THE U.S.
Abstract ID: 35
Individual Paper

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While green space exposure has been considered essential for both physical and mental health of people, not every population is experiencing the same level of exposure in their daily lives. With the increase in the availability of various spatial data, green space exposure in the urban environment has been extensively explored in respect to the socioeconomic background of cities. In addition, researchers have attempted to measure access and exposure to green spaces accurately through calculating green coverage rate or remote sensing techniques.

More recently, street view images have become a valuable means of estimating green space exposure at the human eye level, which may better reflect the true context of green spaces that people experience. Yet, we argue that previous works mostly relied on place-based approach, where street view images are sampled from static and administratively bounded spatial units. Such approach assumes a uniform level of observations within the spatial unit and overlooks the variations among people directed by their daily activities. Moreover, we find that the majority of existing studies focused on large metropolitan areas for data availability and therefore, more attention is needed in small- and medium-sized counties that have been understudied so far.

In this research, we take 25 small- and medium-sized U.S. counties as study sites, and constructed 50,283 walk-based commute trajectories based on Census Transportation Planning Products (CTPP) dataset. For every home-to-work trajectory, we generated sampling points at a one-minute interval assuming typical walking speed and collected four GSV images of different heading angles at each point to obtain a 360-degree panoramic eye-level scenes that people encounter in their daily trips. Then, we applied semantic segmentation technique to GSV images to identify green elements from each image and calculated green exposure as the ratio of green element pixels to total pixels. As a result, two metrics of green exposure level, home- and mobility-based, are derived in this study.

The contrast between the distribution of home- and mobility-based green exposure provides evidence of the "neighborhood effect averaging" problem, one of the important methodological challenges in exposure assessment studies which states that individual exposure level tends to converge toward the average level of the population when human mobility is considered. Also, our correlation results showed positive and negative associations with the income level and non-white population percentage of each site, respectively, which reveal
the inequality in green space exposure based on socioeconomic status. What is worth noting is that the differences among economic and racial subgroups flattens particularly in case of mobility-based green exposure. This indicates that disparities in low income and racial minority populations could be alleviated by considering people’s daily mobility. Lastly, we investigated the non-stationary characteristics of the inequality relationships by comparing correlation coefficients at the county level.

This study contributes to demonstrating the research potential of street-view imagery analytics in small- and medium-sized cities and raising awareness to the unequal provision of green spaces in daily trips in these areas. We employed a people-based approach that considers human mobility to measure people’s green exposure levels and highlight the presence of critical challenges in environmental exposure assessment. Furthermore, we reveal the spatial non-stationarity of green exposure inequality among our study area and call for attention to conduct local-level analysis.

Citations


Key Words: Green space exposure, Inequality, Street view imagery, Deep learning, Small- and medium-sized cities

THE EVOLUTION OF URBAN PLANNING SCHOLARSHIP: MAPPING 30-YEARS’ MEANING SHIFTS OF KEY TOPICS IN JAPA, JPER, JPL USING A DEEP LEARNING LANGUAGE MODEL

Abstract ID: 69

Individual Paper

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Motivation: Mapping the trajectory of research topics evolving and meanings shifting other over time help researchers to understand the history of the discipline and identify future trends. Prior studies have used topic modeling to process big textual data to identify emerging and important topics in planning literature and planning documents (Brinkley & Stahmer, 2021; Fang & Ewing, 2020; Fu et al., 2023), but they ignored the context information. Specifically, prior topic-modeling studies utilize word frequency and cooccurrence to study topics and miss the contextualized meaning of words and the interaction of topics in the corpus. As a result, what topics have a closer relationship with other topics and how meanings behind each topic evolve remain unclear. For example, “transportation planning” may refer to auto-oriented planning in one context and transit-oriented planning in another. Such different contextualized meanings of words are not captured in prior studies. Nevertheless, understanding the shifting meanings of topics and the relationship between different topics are critical for scholars to trace the disciplinary development, locate their own works within the broader context, explore inter-subfield connections, recognize knowledge gaps, and enhance academic communication.
This paper takes on the tasks and answers the following questions: 1) How do major planning research topics interact with each other over the past 30 years? 2) How have different research topics’ meaning changed?

Methodology: We collect all articles and reviews from 1992 to 2021 in the three U.S.-based general planning journals (i.e., Journal of the American Planning Association, Journal of Planning Education and Research, and Journal of Planning Literature) to tackle the following two tasks.

Task 1: Mapping the interaction of different research topics over time. We adopt text mining method to identify the most significant 1000 terms every three years and use deep learning language model (i.e., BERT) to transform the terms into vectors. We identify the primary research topics every three years using agglomerative clustering and get the vector of each topic. By calculating the distance between each pair of topic vectors over time and within the same period, we figure out how close the meanings of each topic in the semantic space.

Task 2: Exploring the meaning shift of planning subfields. We use the tracks of ACSP to represent major subfields of urban planning and see how meanings of each subfield change. We first train BERT model using the 30-year literature, then we put the names of each subfield (e.g., economic development) into BERT model to get each subfield’s semantic vector. We extract the most relevant 1000 terms for each topic every three years and check how the term vectors change.

Preliminary results and next steps: We have identified 15 main research topics using 30-years' urban planning discourse. We find that the key terms of land-use topic and transportation-planning topic are intertwined and inseparable in the semantic space. Meanwhile, food, environmental planning, neighborhood planning, economic development and race are closely connected. Topics such as housing, climate change, international planning, communicative planning and smart growth are relatively independent. Next step, we will dig into each topic by year and figure out what topics have more overlaps, how new topics emerge and old topics fade, and how meaning shifts within each topics.

The study contributes to planning literature by summarizing the semantic evolving roadmap of planning literature. The results can help scholars build connections between their own work and the broader context of the discipline, develop a more nuanced understanding of the complexities and trends within their field. The results also provide recommendations to the ACSP to consider recombining conference tracks to reflect the evolving research topics on inter-subfields.

Citations


Key Words: Planning publication, Semantic networks, Research theme, Deep learning, Natural language processing

THE MENTAL HEALTH BENEFITS OF VISITING NATURE: A SMART PHONE-BASED STUDY

Abstract ID: 75
Individual Paper
The past studies have revealed positive associations between urban greenspaces and physical activity (Liu et al., 2019; Lu, 2019). Urban greenspaces, such as tree-lined streets, parks, and natural areas, often serve as pleasant environments through/within which walking, jogging and cycling can take place, especially physical activity for health and recreational purposes. Recent studies have documented the role of outdoor physical activity in mediating the relationship between exposure to greenness and mental health (Liu et al., 2019; Markevych et al., 2017). For example, scientific evidence shows that performing physical activities in greenspace may generate more mental benefits than doing physical activities in other environments (Mitchell, 2013). Both the amount and the quality of urban greenspaces are found to be significantly related to self-reported psychological wellbeing by encouraging outdoor physical activity (Liu et al., 2019; Lu, 2019). However, the effect of exposure to greenness on mental wellbeing through physical activity is not well understood. Previous studies have typically relied on retrospective questionnaires or artificial set-ups with little ecological validity. On the other hand, due to a paucity of human movement data, the traditional method for estimating greenspace exposure is static: exposure is based on place of residence, which is not able to reflect individual’s real exposure to greenspace. In the present study, we used a smartphone application (Urban Mind) to collect a sample of individuals’ GPS trajectories and their responses to ecological momentary assessments on their exposure to urban nature in a fourteen-day study period. Google Street View imagery was used to estimated study subjects’ greenspace exposure at selected geolocations. We aim to investigate the association between urban greenspaces and physical activity, physical activity and mental wellbeing, and most importantly, the mediating effect of physical activity on the association between urban greenspaces and mental wellbeing. We found significant immediate and lagged associations between mental well-being and exposure to urban nature. These associations were stronger in people with lower baseline levels of wellbeing. People are willing to spend more time outdoors for more urban nature exposure and exposure to urban nature benefits mental wellbeing through encouraging physical activities. Our investigation suggests that the benefits of nature on mental well-being are time-lasting and interact with an individual’s vulnerability to mental illness. These findings have potential implications from the perspectives of global mental health as well as urban planning and design.

Citations


Key Words: Exposure to urban nature, greenspace, mental well-being, physical activity

PREFERENCES FOR AUTONOMOUS VEHICLES: AN INTERSECTIONAL PERSPECTIVE
Abstract ID: 101
Individual Paper
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The advent of autonomous vehicles (AVs) has given rise to a revolution in transportation systems and cities, which might greatly impact people’s daily life and urban development in the future (American Planning Association, 2018). However, technological advancement affects individuals’ experiences of space and time differently (Sheller & Urry, 2006). In this paper, we promote the application of the intersectional perspective in the study of emerging mobilities, and we call for intersectionality as a guiding principle in governing the development of emerging mobilities, to provide a better and more nuanced picture of how emerging mobilities might influence people’s daily life (Hancock, 2007). We conducted a survey about residents’ preferences for autonomous vehicles in Beijing in September 2022. We then use a novel interpretable machine learning—iterative Random Forests (iRFs) model to quantify the preferences for taking autonomous vehicles (Basu et al., 2018). The iRFs method allows us to read differences in preferences not as the characteristics of some socio-demographic groups. It is rather the result of different and interdependent societal stratification processes that result in multiple dimensions of unmet travel needs and preferences. Our findings suggest that, among various factors, people’s preferences for AVs are mostly influenced by the intersectional effects of personal preferences, household structure, and existing travel context. Finally, we discuss the implications for future transportation planning.

Citations

- Hancock, A.-M. (2007). When multiplication doesn’t equal quick addition: Examining intersectionality as a research paradigm. Perspectives on politics, 63-79.

Key Words: Emerging Mobilities, Autonomous Vehicles, Intersectional Perspective, Interpretable Machine Learning

INCORPORATING ESG AND BUILT ENVIRONMENT FACTORS IN OFFICE RELOCATION DECISION-MAKING: A CASE STUDY OF AMAZON IN SEATTLE

Abstract ID: 108
Individual Paper

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Over the past two decades, climate change and business ethics have spurred interest in Environmental, Social, and Governance (ESG) factors to identify sustainable investments while maintaining financial feasibility. ESG has become increasingly important in real estate investment, with potential effects on asset prices and corporate policies. The workforce in the real estate industry has also acknowledged the positive impact of ESG on their career trajectories, and a GRESB survey found that 73% of real estate firms have employees responsible for sustainability tasks, which demonstrates that ESG is not only an emerging trend but also a critical component in real estate industry.

Another trend that has emerged is the hybrid work style in the post-COVID era. Many tech companies in the San Francisco Bay Area began embracing teleworking at the beginning of COVID, which has changed the travel patterns of employees. Companies that previously stationed at city centers have begun considering relocation to suburbs to match demographic, workplace, and management shifts and promote healthier workplaces and work-life balance (Alexandri & Janoschka, 2020). For instance, Amazon is moving about 2,000 tech workers out of its Seattle South Lake Union headquarters and offering smaller offices outside the city. United Airlines is also moving over
1,300 workers out of Chicago Willis Tower headquarters to the suburbs. With COVID having given the "creative class" more flexibility, it is a perfect time to reimagine workplaces.

This paper seeks to address the question of how office relocation can align with ESG goals by considering human mobility patterns and built environment factors that are ESG-related but not often considered in relocation decision-making. Using Amazon at Seattle South Lake Union as an example, we will consider not only the socioeconomic attributes of neighborhoods and location but also the air quality index, travel patterns collected from the Uber Movement Project, and the area of greenery calculated from Google Street View by visual Artificial Intelligence (AI) techniques. We will apply K-mean Clustering to group areas with similar features and potential and identify several alternative office sites suitable for Amazon.

This paper aims to combine ESG considerations with the ongoing office relocation trend and to construct a machine learning model to aid decision-making. The model in this paper is different from traditional models that only consider numeric data. Instead, we aim to identify the importance of the built environment by converting photo information into quantifiable data. Overall, this paper is expected to be a pioneer case study that demonstrates the different clusters of potential for office relocation or even investment using deep learning techniques.

Citations


Key Words: ESG, Office Relocation, Built Environment, Artificial Intelligence, Machine Learning

URBAN COLOR EVALUATION MODEL FOR HISTORICAL BUILDINGS USING STREET VIEW ANALYSIS

Abstract ID: 111
Individual Paper

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While new buildings continue to emerge in the process of urbanization, historical buildings, as valuable legacies carrying national historical memory, are playing an important role in the urban landscape. To promote inclusiveness in urban planning, it is crucial to ensure that historical buildings are well-preserved and integrated into the city's overall aesthetic. Previous studies proved that color harmony is an important factor in the coordination of urban landscapes [1]. Color harmony represents the visual unity of urban space and street interface, emphasizing on avoidance of street architectural color chaos and disorder [2][3]. However, there is a lack of effective quantitative standards to evaluate color harmony focusing on historic areas and buildings. How to integrate quantitative building color index and evaluation techniques into historic area preservation strategies and refined
management needs to be further explored. This study aims to build a new method to evaluate the color harmony of historical buildings through street view technology, semantic segmentation algorithms, the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) method based on entropy weight, questionnaire verification, and take Shanghai's historical buildings as an example to explore. Known as the International Architecture Expo, Shanghai has many excellent historical buildings, which are also important carriers of the history and culture in Shanghai's urban development.

In this study, more than 20,000 high-resolution street view images of over 1,000 historic buildings in Shanghai were acquired using street view technology. These images were then subjected to semantic segmentation and masked using computer vision algorithms (FCN as the model and ADE20K as the training data set) [4]. Color features were extracted from masked images, and color harmony rates of three comparison methods were computed, being color harmony of continuous facades, with the facade across the street, and with the main facade respectively. A multi-indicator evaluation model of three color harmony evaluation methods was built, using the TOPSIS method based on the entropy weight. Overall color harmony rating of Shanghai's historic buildings was generated, which is consistent with the subjective judgment results of our questionnaire containing 30 samples of historical buildings. Thus, we established a valid model to evaluate the color harmony of historic buildings.

The color evaluation model results show that the color harmony of the most preferable historic buildings is in [0.50,0.80], while the color harmony of total historical buildings in Shanghai is in [0.26,1], with an average level of 0.65. Also, color harmony varies across different landscape areas, with buildings in the Old Town area exhibiting relatively high and concentrated harmony within [0.55,0.79], while those in the Hengfu area exhibiting relatively low and dispersed harmony within [0.38,1].

Our study indicates that a particular range exists for preferable color harmony, rather than adhering to the notion that a higher value is always preferable. Moreover, these preferences vary depending on the geographical locale, forming the uniqueness of the historical areas. Therefore, this study proposes the concept of color compatibility interval suitable for quantitative evaluation of color, and takes 12 historic cultural landscape protection zones of Shanghai to determine the corresponding color compatibility interval, providing a reference for the color planning of historical areas in Shanghai.

This study provides a quantitative model for assessing color harmony, and a new application of color inclusiveness in historic area planning. The model can be applied to other cities around the world, providing practical tools for urban planners and conservators to better manage and preserve historic areas and buildings.

Citations


Key Words: Historic Buildings, Historic Area, Color Harmony, Street View Technology, Computer Vision

THE PATHWAY OF URBAN PLANNING AI: FROM PLANNING SUPPORT TO PLAN-MAKING

Abstract ID: 118
Individual Paper
Artificial intelligence (AI) is emerging as an important technology to enhance and reshape urban planning research and practices. However, questions remain unaddressed about what impacts AI will have on urban and regional planning research and practice, what issues are involved and how we respond to and plan for it. This paper addresses some potential issues and challenges in AI-enabled planning process and creates a typology of urban planning AI to characterize and chart a pathway about how urban planning AI could evolve into the future, from AI-assisted, AI-augmented, AI-automated, to AI-autonomized planning, based on a scoping literature review.

Citations


Key Words: Artificial intelligence, Urban Planning process, plan-making, Sustainability and Resilience, decision support

APPLYING AUTOMATION VIA TEXT MINING AND MACHINE LEARNING TO UNDERSTAND PEDESTRIAN CRASH TYPOLOGY

Abstract ID: 155

Individual Paper

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Background - Pedestrians are one of the most vulnerable groups involved in traffic crashes, with reports showing that the number of pedestrians killed on US roads every year exceeds 6,000 and is increasing. As a result of the high level of risk and the upward trend in injuries and fatalities, planners and engineers and place a high priority on reducing pedestrian-involved crashes which in addition to reducing injuries and saving lives can help improve walkability.

Problem - To reduce pedestrian crashes it is important to understand crucial factors such as how the crash occurred, who was at fault, maneuvers undertaken by each party involved and other behavior, roadway and environmental risk factors. While police crash reports contains some information about the crash circumstances and participants, some information such as the pedestrian maneuver, which is critical to understand pedestrian crash typology, is mixed in with other information in free form crash narratives. Given the large number of crashes, manual review of such narratives is inefficient and not practical for a large number of crashes. An automated reliable method is required to extract and structure such information from text narratives.
Methods - This study explores and applies text-mining of crash narratives and machine learning modeling to automatically determine the pedestrian maneuver which can then be used to determine the detailed pedestrian crash type as a combination of motorist maneuver and pedestrian maneuver. Using a sample of 500 crash reports from Florida, the study converts the report narratives into vectorized data through text preprocessing, cleaning, and transformation. Then, the vectorized data is enhanced by adding Pre-crash Direction, an essential indicator for identifying the pedestrian maneuver at-crash. The Pre-crash Direction utilizes a rule-based methodology to capture position information, resulting in an efficient approach that significantly enhances classification accuracy. Machine learning is then used to obtain pedestrian maneuver information. Three classification models were applied: Naïve Bayes (NB), Random Forest (RF), and Extreme Gradient Boosting (XGBoost). NB is the simplest and most widely used probabilistic classifiers; RF and XGBoost are both tree-based models handling complex data with high dimensions.

Results - This approach resulted in a fully automated method to classify pedestrian crashes into a proper crash type. Among the three machine learning models applied, the Random Forests performed the best, with a prediction accuracy of 82%. A larger sample could be used in the future for better classification results. Further, by using a more advanced interpretable technique such as ‘Local Interpretable Model-agnostic Explanations’ (LIME), we could better understand the relationship between the content of the narrative and pedestrian maneuvers. The application of LIME helps to understand how the machine learning model works and provides the necessary evidence on model result reliability.

Contribution - This study provides an approach to help planners and engineers in better understanding of pedestrian crashes. It overcomes limitations of current manual methods of extracting the necessary information for crash typing and improves the efficiency and timeliness of obtaining the information necessary to inform efforts for reduction of pedestrian crashes and improvement of walkability.

Citations


Key Words: Text mining, crash narrative, pedestrian crash type, pedestrian safety, machine learning
As municipalities and regions grapple with increasingly complex challenges, such as climate change and housing crises, new tools are required to facilitate their comprehension and representation. 3D modeling software can offer a more realistic portrayal of proposed alterations to the built environment, but often necessitates specialized expertise and graphic abilities that many urban planners lack, thus limiting accessibility. However, CityEngine, a procedural modeling and 3D visualization tool developed by ESRI, enables city planners to simulate built environment changes based on proposed land use policies. This study examines the potential of procedural modeling with CityEngine to answer two key questions: • Can procedural modeling be used to exhibit various urban planning scenarios? • What are the benefits and difficulties associated with using procedural modeling in the urban planning and policy decision-making process?

The study concentrates on a specific California housing development state policy, Senate Bill 9 (SB9), which authorizes certain property owners to divide their land into two lots and erect two residences on each. This law went into effect on January 1, 2022. Among other issues, the spatial implications of this state statute are unclear to local city planners who must incorporate this new rule into their zoning codes, as well as to the general public who will be affected by the new regulation. No existing planning support systems (PSS) can visualize the impact of such policies at various scales (from parcel to community) in an interactive 3D platform. We propose two key advantages of using procedural modeling for such planning difficulties. First, procedural modeling allows the integration of parcel geometries and formal policies, such as setbacks and floor area ratios, into alternative policies. As a result, it can provide a better estimate of the number of parcels in specific neighborhoods that will be most impacted by such a policy. Second, visualizing SB9 units at the neighborhood or city scale can make the impact of such policies more evident for communities and policymakers, increasing engagement and transparency. This article commences with a review of literature on the use of procedural modeling in planning, with an emphasis on CityEngine. Several case studies are presented to demonstrate the effectiveness of procedural modeling in the field. The study’s procedural models of San Luis Obispo are subsequently presented. Finally, the findings are discussed in relation to SB9 and the use of procedural modeling in the planning field.

Citations


Key Words: Procedural Modeling, SB9, Housing, CityEngine, planning support system

BLOCKCHAIN FOR CIVIC PARTICIPATION: A COMMUNITY ENGAGEMENT TOOL FOR SWAMPSCOTT MASSACHUSETTS
Abstract ID: 162
Individual Paper

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The last decade has brought an explosion of global interest in blockchain technology: new distributed ledgers that allow for transactions to be executed and recorded using cryptocurrency on distributed computer networks (Øines, S. and Jansen 2017).

Due to the growing demand for transparent processes, data security, and accurate representation, blockchain has been hailed by some academics and practitioners as the emergent digital infrastructure that has the potential to improve trust and governmental accountability through enabling participatory democracy (Rabe et al. 2021; Centobelli et al. 2021). In the field of urban planning, civic participation and community engagement play crucial roles in 1) legitimizing decisions made by public agencies (Burby, 2003), and 2) tapping into the combined expertise of non-expert knowledge and the collective intelligence of local communities (Van Herzele, 2004). These processes work alongside expert knowledge to generate innovative solutions tailored to unique local contexts. However, the existing form of civic participation in planning faces several obstacles that hinder its effectiveness, including: unequal access to participation opportunities for diverse social and demographic groups; a lack of motivation among residents; a pervasive distrust in the process due to the belief that it does not result in tangible change; uninviting designs of e-participation platforms; and a disconnect between the participation process and actual decision outcomes. (Rong, 2022)

In approaching the politically fraught topic of decreasing the financialization of housing, blockchain appears to have the potential to enhance community input and deliberation by improving transparency and designing for engagement processes that can better build trust in the long term. Blockchains, embedded with smart contracts, are already disrupting the fields of finance and banking and can offer improved tools for community engagement, public decision-making, transparency and accountability, and collective housing management and ownership (Hollander 2022).

This research examined a community engagement prototypical tool called Community_inPUT that uses blockchain in a civic engagement process in the suburban community of Swampscott, Massachusetts. Situated 15 miles northeast of Boston, the town of Swampscott is comprised of 13,800 residents and 6,300 housing units (U.S. Census 2020). Addressing prior failures to garner public support for affordable housing, we asked: how does a blockchain-based community engagement advance or detract from meaningful and transparent debate around housing?

The Community_inPUT Project uses blockchain combined with AI to reimagine how residents can share their thoughts and ideas in a way that can be recorded, organized, and analyzed in a transparent, trackable, yet anonymous way. DLT provides a transparent and tamper-proof record of transactions, which makes it difficult to manipulate or alter data. Combined with smart contracts, DLT also has the ability to automate the processing of community input, aiding local officials in understanding community opinions about complex topics. Furthermore, digital wallets enable residents to participate anonymously while still receiving rewards for their contributions. This approach incentivizes participation and recognizes residents’ input in public opinion data collection processes, which typically lack feedback loops and offer no rewards nor acknowledgement.

In this paper, we outline a conceptual model for deploying a blockchain-based digital civic participation system that enables greater transparency, trackability, as well as programmability, such as rewarding individuals through a non-custodial digital wallet post hoc for their valuable contributions. Through participant observation, we recorded residents’ engagement with the platform and analyzed patterns of use, commenting, and voting. Additional feedback on the platform was shared in publicly available social media platforms and these comments were also compiled and analyzed thematically. We conclude by drawing policy implications from this research and recommend further research.

Citations

Key Words: Blockchain, Civic Engagement, Digital Civic Participation, e-Participation, Housing

QUALITY OF SPACE AND VITALITY OF PLACE - COMPARISON OF VARIOUS CONCEPTS AND MEASUREMENTS OF STREET CONNECTIVITY AND ITS EFFECT ON TOTAL SALES OF COMMERCIAL DISTRICTS IN SEOUL, REPUBLIC OF KOREA

Abstract ID: 178
Individual Paper

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Street connectivity is the pivotal factor in vitalizing commercial district economies and creating vibrant urban environments. It has been shown that street connectivity has a significant impact on urban health and land use, as well as promoting commercial interaction and leisure activities of citizens through previous studies. In addition, it is required to empirically analyze the influence of street connectivity on the commercial economy as a factor that promotes commercial interaction and leisure activities of citizens.

Studies on connectivity have developed into different approaches depending on the urban, architectural, and transportation contexts, and the majority focus on the connection between one point and another, and the definition of connectivity based on centrality and accessibility. In cities, an approach to evaluate the connectivity of internal spaces at the site level of the city is required, but existing node-centered individual street-level studies have limitations in projecting the urban context. Accordingly, the need for an empirical analysis of the significance and role of street connectivity, which had been dealt with theoretically, and a comparative analysis of the differences with architectural and traffic indicators, was raised. In addition, previous studies related to the economy of commercial districts have focused on analyzing based on socio-economic variables, with studies based on the spatial characteristics of commercial districts lacking.

To address these gaps, this study aims to compare and analyze how the index of street connectivity in the urban context differs from connectivity indicators used in spatial syntax and transportation, and to empirically reveal the effect of street connectivity on the commercial economy. The developed commercial district of Seoul was set as the spatial scope, and sales data was used for the food & beverage (F&B) industry, which is one of the industries that are most affected by people’s direct activities and interactions. Street connectivity was measured as street density and intersection density, and was used as the main variable. Multiple regression analysis was applied to prove that higher street connectivity causes higher F&B business sales of commercial districts.

This study underscores the significance and role of street connectivity, which had previously mainly been dealt with theoretically, and provides a comparison with architectural and traffic indicators. It also emphasizes the importance of streets as public place in relation to the economy of the commercial districts.
This empirical evidence confirms the ripple effect inherent in street connectivity and suggests the need to consider street connectivity with a spatial approach along with existing socio-economic factors for commercial economy and urban vitality in preparing urban planning and policies. The study provides implications for commercial district revitalization and public space preparation policies by raising the importance of appropriate and detailed street development in the urban context. Overall, this research contributes to the development of a comprehensive understanding of street connectivity as the urban context and its relationship with commercial districts’ life.

Citations


Key Words: Street Connectivity, Public Space, Urban Vitality, Walkability, Spatial Big Data Analysis

IMPROVING THE ACCURACY OF INTERSECTION COUNTS AND DENSITY MEASURES OF URBAN STREET NETWORKS
Abstract ID: 186
Individual Paper

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The planning and design of street intersections helps shape overall street network characteristics like connectivity, centrality, compactness, walkability, and safety. Despite street intersections’ apparent simplicity, counting them can be challenging in practice. Typically, automated methods count either planar line intersections (using geometric data like that from TIGER/Line) or topological intersections (using topological data like that from OpenStreetMap), but both can suffer from important biases. The former ignores network non-planarity by incorrectly including overpasses and underpasses in the count. The latter accounts for nonplanarity but can overcount complex intersections, such as the intersection of divided roads, roundabouts, slip lanes, interchanges, etc. This overcount of intersections can in turn bias downstream indicators of compactness, street network grain, and resilience. Worse, these overcounts could vary by design paradigm and geography.

This study addresses this long-standing problem to make two primary contributions. First, it develops a novel topological consolidation algorithm to improve network models and calculate more-accurate intersection counts and densities anywhere in the world in an automated way. Second, it conducts an empirical assessment—across all of the world’s urban areas—of traditional intersection counting methods’ biases to quantify their extent and geographical variation.

This topological consolidation algorithm merges network nodes within a parameterized urban design tolerance distance (constrained to the network) of one another and then rebuilds any incident network edges to maintain the network topology. We parameterize the urban design tolerance using estimates of 1) spatially matched urban areas’ weighted average street width and 2) the world median weighted street width using data from the Atlas of Urban Expansion. After stratifying urban areas by world regions, population size, and intersection density, we
manually validate a subset of representative cities’ results.

Across all of the world’s urban areas, the median percentage of street network nodes (i.e. intersections and dead-ends) that remain after consolidation is around 92%, indicating the previous traditional counting method would overcount by 8% relative to our method. Our analysis reveals that this overcounting afflicts large cities more as they have more roundabouts and complex interchanges that traditional methods struggle with. It also varies by geography, with median values of 13% in urban areas of Western Asia and North Africa, but only around 4% in South and Central Asia. Validation reveals that the algorithm performs with a true positive rate >95%, indicating that it correctly consolidates redundant nodes that should be treated as a single intersection over 95% of the time. It also has a true negative rate around 90%. With both true positive and negative rates above 97%, the algorithm performs best in cities located in land-rich developed countries, such as the U.S., where it primarily corrects redundant nodes caused by divided roadways. However, the method performs worse in China, where individual urban areas exhibit extreme heterogeneity of wide roads in some places but narrow roads in others. This opens up new opportunities for research into adaptive-tolerance consolidation algorithms.

As evidence-based planning grows in importance, practitioners require accurate measures and appropriate tools to understand the real world. By quantifying mismeasurement in a foundational indicator of transportation and urban design, this study aims to improve and advance such evidence-based planning. Our topologically consolidated network models provide more accurate models of the real world, while simultaneously performing much faster in simulations and network analytics. Improved measures of intersection counts and densities can improve our understanding of the relationships between street design, urban resilience, active mobility, and public health.

Citations


Key Words: network models, street networks, transportation, urban analytics

BUILDING NEW KNOWLEDGE FOR ACTION ON URBAN HEALTH EQUITY KNOWLEDGE FOR ACTION ON URBAN HEALTH EQUITY THROUGH THE STUDY OF ACTIVITY SPACES USING BIG DATA: A CASE STUDY OF SOUTHEAST MICHIGAN
Abstract ID: 279
Individual Paper

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Introduction: Racial disparities in health outcomes are a persistent and pressing issue for U.S. cities. For example, while 42% of African Americans over age 20 had hypertension between 2013-2016, the corresponding rate for non-Hispanic White adults was 28.7% (National Center for Health Statistics 2018). As cities’ physical and social environments have a proven relationship with health outcomes (Giles-Corti et al. 2016), urban planning professionals can play an essential role in achieving greater urban health equity (Coburn 2017). However, planning for health equity remains an emerging subfield with limited policy implementation.
This paper addresses one cause of this policy gap: a lack of fine-grained quantitative data which can be used to rigorously evaluate different intervention scenarios. A major challenge with existing health equity data is its exclusive focus on individuals’ exposure to environmental health hazards within residential neighborhoods (Cagney et al. 2020, Chiax et al. 2013). This neglects a consideration of broader “activity spaces” that include workplaces, schools, and other locations where someone’s health may be impacted as a result of daily activities (Cagney et al. 2020). Recent research (Brazil 2022) has successfully used travel big data to assess air pollution exposures in minority community residents’ residential neighborhoods and neighborhoods they visit in Chicago. Inspired by Brazil (2022), this research aims to improve our understanding of health disparities and their causes by examining residents’ activity spaces using big data.

Methods: Applying a combination of big (SafeGraph) and conventional (ACS, etc.) data that is widely available for practitioners, I created representations of activity spaces for residents in the seven-county Southeast Michigan region to measure how social and environmental factors in these spaces holistically impact different population groups’ health outcomes. Informed by previous work on social determinants of health (Braveman et al. 2011, Sarkar & Webster 2017), I constructed three indexes - Neighborhood Disadvantage Index (NDI), Health Opportunity Index (HOI), and Unhealthy Exposure Index (UEI) – to describe different health-equity-related aspects at the census tract level. Then, I used SafeGraph data to identify activity spaces for each tract based on the group of tracts they visit. Next, I assigned weighted indexes to each tract according to its activity space pattern (e.g. proportion of trips between tracts). Finally, I constructed quantitative models to test whether accounting for activity space improves our ability to explain disparate outcomes compared to existing modeling approaches of only using residential-based measures.

Findings: In my preliminary analysis of 1,251 census tracts and 5.48 million origin-destination pairs in January 2020 within Southeast Michigan, I used six demographic variables to construct NDI that represents the relative socio-economic disadvantage levels of each tract within the study area. The analysis reveals that compared to residents of White-dominant tracts, residents of Black-dominant tracts (i.e., > 50% white or black population) are exposed to substantially higher levels of socio-economic disadvantages both in their residential tracts (NDI_Mean Black = 80.6, NDI_Mean White = 39.8, with 100 representing highest socio-economic disadvantage level) and activity spaces (NDI_Mean Black = 71.8, NDI_Mean White = 38.3). The results demonstrate that the disparities in the quality of residential neighborhoods extend to residents' broader activity spaces they frequent. The full quantitative analysis comparing models using conventional residential measures with activity space measures will be completed by ACSP in the fall. These findings emphasize the importance of considering the full range of places that impact individuals’ health, deepening our understanding of health risk exposure equity, and suggesting the importance of regional strategies to advance health equity. The study also advances the field’s methods for drawing useful insights from big data to address substantive planning issues from an equity lens.

Citations

THE DASHBOARD IS NOT DEAD: DASHBOARD AS EFFECTIVE TOOLS IN SKILLS BUILDING, COMMUNITY BUILDING AND SENSE-MAKING

Abstract ID: 281
Individual Paper

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There is ongoing debate in the urban analytics and planning literature about the utility of dashboards as a tool for community engagement and evidence-based decision making. On the one hand, scholars and planning practitioners argue that dashboards are useful tools for smart city planning and local economic development. Some of these scholars have worked with data analytic companies who promote their companies’ data platforms as unique and innovative sources for cities and regions to track economic and social performance. Given how difficult it is for many municipalities to source up-to-date relevant data on their cities’ economic performance, it is not surprising that many municipalities have sourced with the private sector data company to analyze and visualize their city needs. For other scholars, however, this comfortable relationship with private sector data companies and the visualizations they produce, raise troubling questions around data surveillance, data reliability and the public good. For scholars, dashboards represent unexpected delays, technical difficulties, and dead ends. Many of these dashboard criticisms, however, focus on the private sector element of the dashboard and conflate dashboards in general with private sector surveillance and power and the artifacts they produce.

In this paper, we are interested in exploring other elements of a dashboard. We focus on dashboards created primarily with public sector data and ask about the creative and interpretative processes behind their development, along with their contributions. From this questioning and perspective, we argue that dashboards are not dead but rather an effective tool in skills building, community engagement and sense-making.

The creative processes behind the dashboard development were particularly meaningful during the darkest days of the Covid-19 pandemic when many academics who worked in regional planning, independent from each other, began thinking about ways of creating dashboards of data to make sense of the pandemic in their local regions, track its severity, focus policy and practitioner attention and spotlight uneven effects and impacts. At the time there was also an urgent need to employ undergraduate, graduate, and post-doctoral students who had lost many of their field research opportunities and part-time jobs in the local economy. Creating dashboards was not only a way of tracking how the Covid-19 pandemic was affecting local regions, but an emergency regional methodology to employ students and create new research teams out of the research vacuum that the pandemic and the corresponding lockdowns and closure of field research had left.

To develop this argument, we examine three case studies of dashboard development in two different countries: The Carolina tracker at University of North Carolina https://carolinatracker.unc.edu, in the United States, the Kingston dashboard in Kingston Ontario Canada through Queen’s University www.kingstoninfocus.ca and the Toronto after the first wave at the University of Toronto Canada https://torontoafterthefirstwave.com. We first describe the origins of the three dashboards, how they were funded, team size and other motivating events. Then we discuss more generally what they have enabled in terms of new partnerships, repurposes, stabilization of work and learning and sense-making. Finally, we reflect on what this work means for future research and the longer-term sustainability of dashboards and their value in the regional economic development planning, teaching, and learning space.
Urban parks are characterized as appealing green spaces with low cost to use, providing multiple benefits to the quality of life in the metropolis, especially the recreational benefits. These depend on three aspects that are widely discussed by park studies: (1) park characteristics, such as park size, available facilities, cleanliness, safety, etc.; (2) park accessibility, usually measured as the distance between the places of residents and urban parks; (3) park preferences, which reveal residents’ sensitivity to park characteristics and distance, and could vary among social groups or activity timing. How to link these aspects together to explore park-visiting habits and quantify park recreational values is of great importance to park design, planning, and policymaking.

Discrete choice models (DCMs)\(^1\) are deemed as suitable approaches to answer the aforementioned question, by assuming that individuals select urban parks by maximizing the overall utility they can expect to gain\(^2\). In recent years, a growing number of studies have applied DCMs to residents’ park activities regarding willingness-to-pay (WTP)\(^3\), preference heterogeneities\(^4\), and effects of specific park characteristics\(^5\). Despite the flooding innovative ideas, most of existing studies are based on stated preference (SP) approach\(^1\), in which interviewees make choices by looking at park pictures in a survey. Though researchers in other fields have proposed revealed preference (RP) approach to model individuals’ real choices, RP-based DCMs are rarely applied to urban park studies, probably due to the huge human labor for data collection in a wide range of time and space.

The emergence of geo-location big data has brought new opportunities. Using a one-year Tokyo mobile phone dataset provided by ZENRIN DataCom Co., LTD, our study generated a RP dataset, which contains activities made by 1.5 million mobile phone users in 262 urban parks larger than 0.5 ha in 2011. To cover the research gap, our study proposed the concept of willingness-to-travel (WTT)\(^2\) to measure the recreation value of urban parks and explored the heterogeneity of WTT in time and space. Multinomial logit model (MNL) and mixed logit model (MXL) were built to quantify user preference and WTT. Park characteristics considered includes basic information (size, built year, notable facilities, etc.) from field survey, and online ratings retrieved from Google API. We aim to answer the following questions: (1) How far are residents willing to travel to different urban parks? (2) How does residents’ WTT vary among seasons, weekdays and weekends, and daytime of park visits? (3) What is the policy implication of WTT and its variance?

Based on the preliminary experiment, we found that 35.2% of Tokyo residents have visited at least two different parks, and a majority of them didn’t choose the park closest to their home. Moreover, residents tended to travel a longer distance for parks with larger size and higher ratings, and their WTT was obviously larger in spring and on weekends than in other periods. The contribution of our study is two-fold. On the one side, our study proved the feasibility of using mobile phone data to build RP-based models, which is complementary to existing SP park...
studies. On the other side, our findings provide new perspectives for park planners and policymakers, by quantifying the trade-offs that residents made when choosing different park options. We conclude that park characteristics, park accessibility, and preference heterogeneities should be simultaneously considered to formulate planning and design strategies beyond generic guidelines.

1. Stated preference (SP) and revealed preference (RP) are two typical approaches to collect data for DCMs.

2. Willingness-to-travel (WTT) denotes how far (meters) an individual is willing to travel for a park. WTT is similar to willingness-to-pay (WTP) but is more suitable for urban park studies.

Citations


Key Words: urban park, willingness-to-travel (WTT), discrete choice model, mobile phone data, Tokyo

DIFFERENCES AND SIMILARITIES IN PERCEPTIONS OF AUTONOMOUS VEHICLES BETWEEN PEOPLE WITH DISABILITIES AND PEOPLE WITHOUT DISABILITIES

Abstract ID: 337

Individual Paper

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The Autonomous Vehicles (AV), often viewed as the next revolution in transportation, will have a great impact on all aspects of our society, especially on mobility. Most research (Claypool, Bin-Nun and Gerlach 2017) show that AV has the potential to increase mobility for those who are unable or unwilling to drive, such as people with disability (PwD) and elderly. The benefits for these groups include independence, reduction in social isolation, and access to essential services. Some of their mobility services are currently provided by public transit, paratransit, or ridesharing companies. But each of these alternatives has significant challenges. Public transit remains hard to utilize due mainly to accessibility-related equipment and attitudinal issues from drivers (Bezyak, Sabella and Gattis 2017). Paratransit services in the United States are being stressed from high demand and low funding (United States Government Accountability Office 2012). Besides of lack of accessible devices, ridesharing services can be expensive for PwD who in general have lower income than People without Disabilities (Pwtd) due to decreased accessibility to employment and the corresponding additional challenges (Clewlow and Mishra 2017).

To realize the potential of AV for PwD, it is essential to understand the special needs and understandings from the community. However, there has been little research comparing the differences and similarities between PwD and Pwtd in their perceptions of AV. How comfortable and safe that PwD think about AV? How much PwD is willing to
pay for the AV technology given their affordability? What are some social factors of AV would make it more likely for PwD to utilize it? These are the questions this study seeks to answer. Additionally, this study asks how these generalities and differences translate into technical requirements and policy recommendations for autonomous vehicles.

Two surveys were used to examine the perceptions of PwD and PwtD about AV and to understand the factors influencing their perceptions. One statewide survey targeted entire Michigan population and the other area wide survey focused on PwD. Multinominal Logistic Regression models were used to analyze the survey results.

The study shows that females were more concerned about the safety of AV whether with disabilities or not. Employment status and ethnicity had limited influence on the perception of AV safety for PwD and PwtD. In addition, PwtD who regularly use public transportation were more likely to feel safe and ride AV than those who do not use public transportation. Those with higher levels of education were more likely to feel safe with AV. PwD were not willing to pay more for AV rides than Uber/Lyft rides. Contrary to some of the previous findings, there is strong receptivity to AV among PwD. Despite their social isolation concerns, PwD favored personal AV over shared form AV. This finding indicates that PwD prioritize mobility over social functions in AV technology.

Citations

- United States Government Accountability Office. 2012. ADA PARATRANSPORT SERVICES Demand Has Increased, but Little is Known about Compliance.

Key Words: Inclusive mobility, Mobility for People with Disabilities, Autonomous Vehicles, Disruptive technology, Social

AN EXAMINATION OF THE SPATIAL COVERAGE AND TEMPORAL VARIABILITY OF GOOGLE STREET VIEW (GSV) IMAGES IN SMALL- AND MEDIUM-SIZED CITIES: A PEOPLE-BASED APPROACH

Abstract ID: 356
Individual Paper

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Recently, planners, geographers, and public health researchers have widely utilized Google Street View (GSV) images for studies related to built environments (e.g., Ki & Lee, 2021). Moreover, recent advances in deep learning-based computer vision methods and GIScience research methods accelerate the application of GSV images for planning and geography research (e.g., Koo et al., 2022).

However, little attention has made to investigate the potential methodological issues of GSV images, such as spatial coverage and the temporal variability of GSV images. Limited spatial coverage and high temporal variability of GSV images might lead to methodological issues, such as uncertainties and threats to validity and reliability (e.g., Kim et al., 2021). Despite a handful of studies that examine the potential methodological issues of GSV images, two important research gaps must be filled. First, it remains unclear the spatial coverage and temporal

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variability of GSV images of small- and medium-sized cities in the United States, which researchers have paid relatively less attention to. Second, previous studies largely overlook the people-based approach -- an approach that considers people's daily activity-travel (Kwan, 2009) -- that will provide more meaningful implications on the methodological issues of GSV images pertaining to people's daily mobility patterns. Therefore, our research aimed to fill these significant research gaps.

Specifically, we focused on 97,505 walk commuters’ home-to-work commute trips, which were estimated based on the Census Transportation Planning Products (CTPP) data. Our samples were based on 45 small- and medium-sized U.S. cities. First, we created an individual walk commuter's home-to-work trajectory and obtained GSV image metadata (e.g., availability and timestamp) for all 1-mins interval points in our samples' trajectories. We then computed our sample's spatial coverage and temporal variability of GSV images.

Our results revealed that about 40% of our samples do not have adequate GSV image spatial coverage. We also demonstrated that the average monthly variation in GSV images' timestamps (i.e., when GSV images were taken) is approximately 80 months (i.e., about seven years). Also, 10% of the walk-based commuters from small- and medium-sized cities have GSV images (along their trajectories) taken within one year. Furthermore, we illustrated geographical differences in spatial coverage and temporal variability. For instance, the difference in the spatial coverage score between Erie (PA) and Cedar Falls-Waterloo (IA) was the largest. The difference in the temporal variability level between Lewiston (ME) and Cedar Falls-Waterloo (IA) was the largest, which was approximately nine years.

Our research significantly contributes to a growing number of planning studies on street-view analytics and its applications. As our results demonstrate the methodological issues of GSV images, we urge researchers and planners (whose works pertain to street-view images) to acknowledge these limitations (i.e., low spatial coverage and high temporal variability), which may negatively affect their analytical results (e.g., uncertainties and threats to validity and reliability). These methodological issues might be particular problems when study areas are small- and medium-sized cities and when researchers employ a people-based approach (e.g., using GSV images to estimate green space exposure in people's daily trajectories). We also discussed potential solutions to mitigate these methodological issues of GSV images, including crowdsourcing-based services (e.g., Mapillary) and social media services (e.g., YouTube).

Citations


Key Words: built environment, commute, Google Street View (GSV), small- and medium-sized cities, walk

CHATDESIGN: A NEW PARTICIPATORY DESIGN PLATFORM ENHANCED BY GENERATIVE ARTIFICIAL INTELLIGENCE MODELS
Abstract ID: 358
Individual Paper
The advancement of computational techniques has created new opportunities for planning and design. However, the two major schools in the field, namely, design computation and planning support systems (PSS), face different challenges in supporting participatory planning and design. Design computation mostly focuses on design generation as a narrow design process, relying on tools that often require design knowledge and skills possessed only by professionals. On the other hand, PSS targets using technical tools for a general design process, which includes the exchange of information with the public, but interpretation of collected information and design generation still fall on professional planners. Given those limitations in current planning and design support, questions arise: How can we apply computational techniques to enable the public to generate plans and designs that truly reflect their ideas? How can individuals with little planning and design expertise use these techniques to come up with realistic and meaningful results? How can a new computation support system be developed to streamline the entire process, allowing interactions between the public and the computational system to exemplify, generate, modify, and decide designs? These are some of the crucial questions that need to be addressed to create a more inclusive and accessible participatory planning and design process.

The emergence of generative artificial intelligence (AI) models provides new opportunities to address those challenges. Early studies have explored the use of generative adversarial networks and text-to-image models such as DALL-E for participatory urban planning and design, but the quality of generated images and interaction with the public were limited. While the recently developed ChatGPT offers excellent chatting functionality for user interaction, it has limitations in dealing with images which is key in planning and design tasks. Although new integrated systems such as Visual ChatGPT are emerging to address this issue, their general purpose nature presents challenges in their applications in planning and design, particularly in design concept and spatial relationships.

This study aims to address the research gaps by introducing ChatDesign, a new interactive and participatory urban design platform that leverages integrated generative AI models. ChatDesign incorporates ChatGPT, code renderer, and visual generative models through a domain knowledge-based prompt manager, following the main framework structure of the Visual ChatGPT. With ChatDesign, users can input a text query and an image, which are processed by the prompt manager and sent to ChatGPT to generate JavaScript codes for spatially aware simple designs. These codes are rendered as 2D/3D design models by the code renderer, dispatched to visual generative models by the prompt manager, and used to generate improved designs with details and variations. Users can modify designs by sending their requirements to ChatGPT via chatting, and the prompt manager will convert those queries into chain-of-thought style instructions and dispatch them to corresponding visual generative models to complete the tasks until the user is satisfied with the generated designs. The visual generative models employed include stable diffusion, Pix2Pix, ControlNet, and MaskFormer models, allowing for image generation, style transformation, sketch to image, and object modification tasks.

The ChatDesign is demonstrated in a few case designs, including downtown development in Portland, neighborhood redevelopment in Manhattan, and street regeneration in Seoul. Through those cases, the study illustrates how ChatDesign system can facilitate public participation in planning and design and enable users to generate their own designs through chatting with the system. ChatDesign is accessible to the public via various mediums, such as online website and touch screen devices. This system offers a new approach to integrating emerging AI techniques to facilitate the participatory urban planning and design process that is accessible, inclusive, and reflective of the public's ideas and needs.

Citations


Key Words: Planning support, ChatGPT, Artificial intelligence, Generative models, Public participation

PERCEPTION OF URBAN GROWTH AND DECLINE WITH MULTI-DIMENSIONAL URBAN IMAGE DATA BASED ON HUMAN-BASED ASSESSMENT
Abstract ID: 462
Individual Paper

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Urban growth and decline change the city. Urban growth is a dynamic process that affects a city on many different spatial and temporal scales and is linked to the elements that drive landscape change, such as the environment, politics, geography, and other considerations (Akın et al., 2015). Urban decline, which generally refers to a process where a city or a portion of a city degrades through time, has grown to be a significant issue in many cities throughout the world (Hwang and Woo, 2020). These changes make people aware of the change in urban areas. Previous studies about urban perception mainly consider measuring how people feel directly in the urban area using images (Zhang et al., 2018), and people's perceptions based on the elements of street view image data (Ma et al., 2021). The visual perception, e.g., openness, and emotional perception, e.g., beauty and safety of people in the urban region can be factors of urban regeneration potential (He et al., 2023). Those previous studies rarely identified to what extent visual components in the image of urban scene influence perception of urban growth and decline although we can feel whether the urban scene shows growth or decline. Thus, it is necessary to investigate perceptions of street components in urban scenes that determine perception of growth and decline in urban areas.

This study aims to investigate which factors make people aware of urban growth and decline in a street. It aims to distinguish factors based on urban images of various dimensions and to investigate how they affect perceptions of growth and decline. Toward that goal, this study analyzes 1) perceptions of urban growth and decline factors in 2D street view images, and 2) analyzes the urban growth and decline in 3D visual perception using 3D point cloud data. In this study, we collected 2D and 3D urban space image data in urban regeneration areas as the target site by using 2D street view image data and 3D airborne las data. Then, the target site images were converted into a virtual reality and surveyed to measure people’s perceptions. The survey consists of four categories that compose the street: physical (building, road, etc.), environmental (greenness, sky, etc.), social (cars, city lights, etc.), and economic (buildings, Signs, etc.) factors. We trained the elements using Mask R-CNN deep learning algorithm and performed the segmentation to detect the components and calculate the pixel ranges. The 3D point cloud data was voxelized, and after classification using Pointnet, deep learning algorithm, we calculated the voxel density and volume within the visual range to consider the elements for invisible parts that were not considered in 2D. Then, we used multivariate linear regression to analyze relationships between the detected 2D and 3D factors for human perception scores of urban growth and decline.

This study has meaningful findings. We use regression analysis to demonstrate which elements have significant impacts on growth and decline perceptions. Among the 2D analysis factors, the number of buildings and the ratio of buildings and green space in urban areas had a great influence on the perception of growth and decline. The 3D analysis elements, the density of building voxels, the visual volume, and the volume of green spaces showed a high
explanation in determining the growth and decline of urban areas. Preliminary results show that factors in urban areas can influence people's perceptions of urban growth and decline. Buildings and green spaces are important factors that determine the perception of urban growth and decline. We expect that the analysis of multi-dimensional image data in urban areas will expand our understanding of urban growth and decline.

Citations


Key Words: Urban Growth and Decline, Human Perception, Deep Learning, Computer Vision, 3D Dimensional Scene

MAPPING AND EXAMINING PEDESTRIAN LEVEL OUTDOOR HEAT EXPOSURE DISTRIBUTION IN PHILADELPHIA

Abstract ID: 492
Individual Paper

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Extreme heat events are increasing in frequency and intensity in US cities and are responsible for a greater annual number of climate-related fatalities, on average, than any other form of extreme weather (Robine et al. 2008). Due to climate change, multi-day heat waves are projected to increase in frequency, length, and intensity in many cities (Alexander and Arblaster, 2009). The urban heat island effect is believed to further exacerbate the mortality increase caused by heat stress in cities (Gabriel and Endlicher, 2011). Exposure to excessive heat can kill people, and it also can cause general discomfort, respiratory problems, heat cramps and exhaustion, non-fatal heat stroke, and dehydration, all of which lead to a loss of labor productivity and decreased learning.

Knowing the spatial distribution and the temporal variation of urban heat is thus important for mitigating the negative impacts of heat exposure on human health and building resilience to more and more frequent and intensive heat events in the context of climate change (Li and Wang, 2021). The satellite-derived land surface temperature (LST) provides an efficient way to map the spatial distribution of urban heat at a large scale. While being widely used in urban heat mapping, LST cannot present the human-centric and pedestrian-level heat exposure in cities because of the coarse resolution and fixed observation periods. In addition, the coarse resolution LST usually represents the surface temperature of building roofs and the top of tree canopies, which are not the places of human activities.

Fine-level microclimate modeling based on high-resolution, three-dimensional urban models and local meteorological data provides a more comprehensive way to examine outdoor heat exposure at pedestrian level (Lindberg et al., 2016; Li, 2021). This study examined the heat exposure from pedestrian perspective by mapping the heat exposure along the sidewalk in Philadelphia, Pennsylvania. The urban microclimate modeling was used to generate the 1m resolution outdoor heat exposure based on high resolution urban 3D geometrical model derived from remotely sensed datasets. In order to generate the heat exposure along the sidewalks, this project overlaid
the sidewalk map on the generated 1 m resolution urban heat exposure map to calculate the heat exposure along the streets. Based on the sidewalk level heat exposure map, this study further estimated the heat exposure along the sidewalk from each building block to nearby locations along the sidewalks within a walking distance of 400 meters, which is usually considered as the general walking distance threshold. The building level heat exposure data were then aggregated at the census tract level to compare with the socio-economic variables. Result shows that the income and educational levels are more important factors associated with the heat exposure level in Philadelphia. The racial/ethnic variables are not significantly associated with the heat exposure level from pedestrian’s perspective. This is the first study to examine the urban outdoor heat exposure data at the sidewalk level from the pedestrian perspective. This kind of study would provide new reference for developing more pedestrian friendly neighborhood in the context of the more and more frequent extreme heat events caused by climate change. The human-centric, fine-resolution, and pedestrian-level urban heat exposure maps would help to guide policymaking, community engagement, and urban heat management across neighborhoods in Philadelphia. Such information would also empower Philadelphians through the democratization of urban heat information, which would help to enhance bottom-up climate resilience to extreme heat in Philadelphia. The outcomes of this project will help urban planners and city governments to develop plans to enhance climate resilience for all neighborhoods and all people.

Citations


Key Words: urban heat, climate change, pedestrian heat exposure, urban analytics

EVALUATING THE AVAILABILITY OF SUBWAY SERVICES AND DELINEATING CATCHMENT AREAS BASED ON THE SPATIALIZATION OF TIME: A CASE STUDY OF SHANGHAI

Abstract ID: 494

Individual Paper

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Introduction - When considering the true moment of accessing subway services as boarding, both the time to reach the station and waiting time after entering should be included in a person’s time budget. However, people often only pay attention to the travel time before reaching the station and neglect the waiting time after entering the station. One reason for this neglect is that space is ‘explicit’ while time is ‘implicit.’

This study aims to explore spatialization of time by evaluating subway service availability and delineating catchment areas of stations, transforming implicit waiting times into explicit spatial impacts and introducing a
concept of spatio-temporal transformation into urban planning and transportation fields.

Approach and methodology - In this study, we use a smart card dataset to calculate the waiting time for passengers after entering the station. For non-transfer passengers, their waiting time is the waiting time at the entry station, and thus we can obtain the average waiting time at each station at different times.

For service availability evaluation, we first perform service area analysis in network analysis to calculate the service area under different walking time cutoffs. Then, we convert the waiting time into spatial impact as impedance of time cutoff, which is reflected as a reduction in service area. After weighting and summing up the service area under different time cutoffs, an availability index is obtained and compared with the evaluation result without considering station waiting time.

For division of subway station catchment areas, we divide the research area into 100 m×100 m grid units and assume all have subway demand. Each unit selects the departure station based on shortest walking time T and units choosing the same station form its catchment area. We calculate the sum of T and average waiting time \( T_w \) for each unit and its ratio \( p \) to T. According to the diffusion cartogram, which uses the main parameter \( p \), we re-divide station catchment areas and compare to find units where station selection has changed. Combined with mobile phone signaling data, we obtain the number of people who may change their station selection.

Findings - Taking morning peak (7:00-10:00) as an example, in terms of service availability evaluation, after considering waiting time, the average service level of each street committee decreased by 26%, with a maximum decrease of 78%, and the overall service level index within Inner Ring Road increased by 4%. In terms of station catchment area division, after waiting time acts on space, space tends to expand outward beyond the Outer Ring Road. A total of 3.3% of units have changed their station selection choices, corresponding to 150,000 actual passengers, with subway demand accounting for 7% of total subway passengers.

Relevance and implications - This study introduces a concept of spatio-temporal transformation into urban planning and transportation fields and provides empirical analysis from two perspectives.

Service availability evaluation is a top-down perspective for resource allocation. Results show that when allocating spatial resources for subway networks under goal-oriented targets, redundancy should be considered to offset losses caused by waiting time and attention should be paid to implicit unfairness caused by temporal factors.

Catchment area division is a bottom-up perspective for residents to choose travel services. The results show that when individuals choose subway stations based on shortest spatial distance for overall time budgeting purposes, there will be a certain degree of unreasonable behavior which will increase congestion at individual stations, leading to longer waiting times. Therefore, it provides a basis for traffic demand management strategies aimed at guiding residents to change their station selection.

Citations


Key Words: Spatialization of time, Subway Services availability, Station Catchment Areas, Diffusion Cartogram, Smart card dataset

WHY DO TEENAGERS OBTAIN A DRIVER’S LICENSE? USING XGBOOST AND SHAP VALUES FOR AN IN-DEPTH INTERPRETATION OF YOUTH LICENSING IN THE US
Abstract ID: 529
Individual Paper

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Is the younger generation in America becoming less dependent on cars? Data from the National Household Travel Surveys (NHTS) suggest so. The surveys reveal a noticeable decline in the rate of driver’s license acquisition among teenagers aged 16-20. In 2017, only 65.4% of this age group possessed a driver’s license, which marks an 8.3% and 8.1% decrease compared to 2001 and 2009, respectively.

This study proposes an innovative analytical framework aimed at identifying the factors influencing youth licensing. The framework comprises four key components: (1) traditional choice modeling, (2) a comparison of multiple machine learning (ML) classifiers to evaluate prediction performance, (3) the implementation of eXtreme Gradient Boosting (XGBoost) and SHAP (SHapley Additive exPlanation) to identify the importance of different features and the intricate non-linear and interaction effects among them, and (4) the creation of "what-if" scenarios to enable a cross-generational comparison of automobile usage.

This study presents and analyzes information gathered from the three most recent nationwide travel surveys: the 2001, 2009, and 2017 National Household Travel Surveys (NHTS). The inclusion of the 2001 NHTS data allows for the observation of changes in driver’s license acquisition over an extended period. The study’s primary objective is to highlight the major findings, which are outlined as follows:

The decline in licensing rates among Gen Z as compared to Millennials can be attributed to a shift in attitudes and cultural changes, to some extent.
Some characteristics of Gen Z, such as their inclination towards educational trips and growing up in a digital world influence their decisions significantly.
In this study, XGBoost performed better than other statistical and ML classifiers, while SHAP proved to be an effective tool for comprehending the socioeconomic factors affecting transportation outcomes using traditional behavioural survey data.
The effects of percent of licensed family members, educational attainment, and household incomes per capita are most critical factors to youth licensing, and merit particular attention from planners, professional, and policy makers.
It is anticipated that once they acquire a driver’s license, Gen Z will drive less compared to Millennials. To uncover causality and improve prediction accuracy for the behavioral changes across generations, future studies should consider combining longitudinal data collection with ML algorithms. Future research could also collaborate with local agencies to gather state-level licensure regulations and investigate their exact effects on youth licensing and automobility over time.

Citations
The availability of crash data regarding the deployment of Advanced Driving Assistance Systems (ADAS) remains limited, despite their widespread adoption. Currently, the National Highway Traffic Safety Administration (NHTSA) requires automotive producers to only report crashes involving Level 2 or higher levels of ADAS or Autonomous Driving Systems (ADS) without requiring the reporting of how lower-level ADAS features affect traffic crashes. While it is possible to match ADAS features with national crash databases using vehicle models and years (Goddard et al., 2022), whether ADAS features were activated and how they may have affected the crashes cannot be retrieved. The police crash reports (crash reports) data can potentially incorporate the ADAS information to address this shortage of ADAS empirical data. However, researchers have not explored how current crash reports collect ADAS information nor adequately addressed the specifics of what and how ADAS information should be collected in crash reports.

Our study aims to fill these gaps in the literature by thoroughly reviewing previous research that investigated police crash reports data collection, optimization, and cross-validation. Our goal is to inventory the best practices and limitations in the current practice to evaluate the feasibility and effectiveness of using crash reports to create a consistent and reliable database of crashes involving ADAS systems. Our literature review will also summarize the state of practices in analyzing crash reports data, including bias removal, denoising, and automated data processing. The literature review will be supplemented by an in-depth review of crash report forms and self-report crash forms currently used in the fifty US states and the Washington District. We also propose thoughtfully reviewing the 6th edition revision of Model Minimum Uniform Crash Criteria (MMUCC), published in Feb 2023, to evaluate whether the newest version of crash reports protocols adequately addresses the shortage of ADAS safety data.

Our preliminary analysis found that crash reports collect some unstructured data, such as crash narratives and diagrammatic representations, which are seldom used due to their complexity (Sayed et al., 2021). Meanwhile, natural language processing algorithms are found to extract information relatively accurately from the police officers’ hand-written crash narratives (Zheng et al., 2015), suggesting a promising direction of collecting ADAS features through a combination of adding a column of “ADAS Systems Involved” as part of a new structured data and enriching the details in the crash descriptions in an unstructured manner. By looking at factors affecting the accuracy of crash reports, we highlight the importance of educating police officers with sufficient knowledge of ADAS systems and the importance of entering such information accurately. We also need to consider not overwhelming police officers with ADAS information overload, as extra workloads are also found to negatively impact the accuracy of crash report forms (Burdett et al., 2022). Besides, our analysis of the current crash report forms and self-report forms found inconsistency between states regarding how ADAS information is entered, hindering the ability to create a national database on ADAS-involved crashes. Our review of the 6th edition of...
MMUCC found insufficient attention to ADAS in the latest MMUCC revision.

Our study contributes to understanding ADAS crash data collection and optimal techniques for handling and validating the crash reports data. Planning scholars interested in using the public crash database to assess the safety outcomes of ADAS features can understand the current state of practices by reviewing our study. We also aim to answer whether and how ADAS information should be collected by crash reports, which provide recommendations and guidelines for enhancing crash reporting processes and future revisions of MMUCC.

Citations


Key Words: transportation safety, police crash reporting, transportation data collection, automated vehicle technology, advanced driver assistance systems

VISIONARY OR ILLUSION: A REVIEW OF STREET ATTRIBUTES DRIVEN BY COMPUTER VISION

Abstract ID: 620
Individual Paper

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The proliferation of urban imagery data analysis, propelled by Computer Vision (CV), has gained considerable traction in recent years. The benefits of extensive data coverage and efficient processing have led to the development of various street attributes generated by visual AI techniques. Nonetheless, a comprehensive categorization of these attributes, their integration into measurement methodologies, and their influence on pedestrian experiences still need to be understood.

In an effort to scrutinize these CV-driven street attributes and their potential for evaluating the built environment, a systematic review of 179 papers was conducted. This review encompassed 80 street attributes spanning a range of topics, including urban health, housing prices, morphology, climate change, and walkability. Based on the findings of these studies, the attributes were sorted into three data types—binary, count, and ratio—and assigned labels indicating positive, negative, or unknown effectiveness. The resulting list exposed three primary concerns: ambiguous definitions, uncertain effectiveness, and the absence of threshold settings, hindering their capacity to quantify physical quality.

The discussion section delves into two underlying causes for these issues: divided research efforts (with CV and urban design conducted independently, resulting in a communication gap and subsequent mismatches) and a dearth of data derived from public feedback. In light of these insights, three recommendations for enhancement are put forth: 1) the establishment of a data-sharing platform mechanism; 2) an emphasis on the value of feedback from pedestrians, residents, and users of the urban environment; and 3) the encouragement of interdisciplinary planning education in this domain, as the obstacles to mastering cutting-edge visual AI technology continue to
diminish.

Citations


Key Words: street attributes, computer vision

MRS. DALLOWAY, BUT WRITTEN BY THE PLANNING FORCE: EVIDENCE OF SHANGHAI'S DAILY URBAN FLOW'S ASSOCIATION WITH SUBURBANIZATION PROCESS REVEALED BY SPATIAL BIG DATA

Abstract ID: 673
Individual Paper

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Over the past 50 years, Asian megacities have experienced significant urban growth and suburbanization, largely driven by planning efforts. Public transit infrastructure development, characteristic of "incrementally planned cities," sought to manage and direct urban flows to achieve desired outcomes. This study examines Shanghai, a prominent Chinese megacity, and investigates the spatiotemporal patterns of various urban transit flows in relation to the suburbanization process. Utilizing multiple spatial big data sources, including long-term remote sensing images, metro smart card records, taxi GPS data, points of interest (POI), and building footprint data, we reconstruct Shanghai's suburbanization from 1980 to 2015 and analyze hourly urban transit flow patterns for taxi and subway trips between April 19-26, 2015. A geographically temporal weighted regression (GTWR) model is employed to address two key questions: (1) What are the spatiotemporal patterns of subway and taxi urban transit flows? (2) How do the relationships between these transit flows and the planned suburbanization process in Shanghai connect historically, to current land-use patterns, and to the significance of timely transit-oriented development (TOD) nodes?

The GTWR model's results indicate that (1) due to the time delay and complexity of residents' response to planned suburbanization, the objectives of organizing urban transit flows through public transit infrastructure implementation were not achieved in Shanghai; and (2) the over-construction of suburban centers and public transport infrastructure did not meet residents' needs, failing to alleviate the burden of urban transit flows during rapid urbanization. To address the challenges arising from planned suburbanization's impact on urban transit flows, this paper recommends integrating a social sensing conceptual framework of multiple spaces with geospatial big data and advanced spatial analysis models, which could inform planning strategies that reconcile historical incremental planning outcomes and address the challenges posed by rapid urbanization.

Citations


Key Words: Spatial Big data, Suburbanization, Planning legacy, Urban flows, Advanced spatial analysis model

CHARACTERIZATION AND PREDICTION OF MOBILITY RESILIENCE OF TRANSPORTATION NETWORK: A SPATIOTEMPORAL GRAPH DIFFUSION CONVOLUTIONAL RECURRENT NEURAL NETWORK APPROACH

Resilience of transportation network is an increasingly important concept to help understand the response of urban mobility system against perturbations. In the literature, related studies focus more on the description and quantification of network resilience driven by numerical simulations or from qualitative perspectives. However, there is a lack of data-driven approaches to characterize and predict network resilience, particularly for mobility resilience of transportation network, which describes how human mobility patterns change due to disruption of transportation network. In this study, we introduced the concept of “resilience triangle” to calculate loss of mobility performance of transportation network during disruptions as a characterization method of mobility resilience to demonstrate mobility response of transportation network in resisting against and recovering from disruptions. Specifically, we modelled the whole transportation network as a graph whose nodes were traffic detectors instead of intersections or highway ramps due to data availability. Then we integrated the monitored traffic volume and speed as an indicator of node mobility performance in transportation network and described the change of node mobility performance against disruptions to characterize the mobility resilience. Using mobility data of highway network against Hurricane Dorian in Miami-Dade County, Florida, we found that the highway network displayed three kinds of mobility responses that the hurricane could destroy, hardly affect, and even improve mobility performance of nodes within the highway network. In addition, the mobility performance of nodes in the highway network demonstrated significant temporal response process and typical spatial distribution patterns in response to Hurricane Dorian. Motivated by this, we further incorporated the spatiotemporal features affecting the patterns of mobility resilience into a spatiotemporal Graph Diffusion Convolutional Recurrent Neural Network (GDCRNN) approach to predicting mobility resilience. The prediction model fully considered the effect of the spatial patterns of geographical features, built environment attributes, and socio-demographics on urban mobility systems. Based on geographical adjacency, land use similarity, and demographical similarity between nodes in transportation network, we separately constructed undirected and directed graphs to model their spatial characteristics and then employed RNN cells to extract temporal features from time-series mobility data. The results suggested that the GDCRNN models with directed graphs performed better than those with undirected graphs, demographical similarity better than land use similarity and geographical adjacency, all of which outperformed other baseline models. Furthermore, the GDCRNN model based on the directed graph simultaneously considering geographical, land use, and demographical similarity performed the best in predicting the mobility resilience of highway network, with mean absolute error (MAE) less than 0.06, root mean square error (RMSE) less than 0.09, and correlation coefficient (r) higher than 0.95. Therefore, the proposed deep learning model can achieve accurate prediction of mobility resilience of transportation network against disruptions to assist decision-makers in taking precautions to maintain a demonstrated level of urban mobility.

Citations

Key Words: Transportation network, Mobility resilience, Spatiotemporal traffic prediction, Graph convolutional neural network, Deep learning

PATHWAY BUFFER MEASURES OF PEDESTRIAN QUALITY FOR THE ENTIRE UNITED STATES
Abstract ID: 681
Individual Paper

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In light of climate change and obesity crises, planning cities and communities in which common errands can be run without relying on a car has become a common goal. While not entirely a new idea, this goal has been adopted by city officials and planners around the world under the name “15 minute cities” (Ables, 2023).

With this study, I offer planners and planning scholars a pathway buffer-based tool that can be used to assess how a city are faring at making common errands feasible or pleasant on foot, and for identifying highly visible disamenity land uses. This tool is intended to complement existing conceptions of pedestrian quality, such as environmental audit-based methods (Boarnet et al., 2011) or measures of land use mix (Gehrke & Clifton, 2019).

Specifically, I estimate what land uses pedestrians in each metropolitan census block in the United States encounter when walking for two common errands - purchasing food, or walking their children to their nearest elementary school – in locations where this is feasible. Specifically, I focus on land uses that act as disamenities to pedestrians, using associations from prior research on pedestrian route choice (Basu et al., 2022), using land use and street network data from OpenStreetMap (Boeing, 2017). In effect, I ask two questions: “Is it possible to complete errand X within one mile of walking distance?,” and “If it is possible, what share of land uses along the way are likely to cause discomfort?”.

Using this framework, I demonstrate the presence of racial inequities in the ability to perform errands on foot, and pedestrian quality of performing those errands. At the same time, I show that associations between racial and socioeconomic variables are not the same: While wealthier, whiter households are less likely to live within walking distance (defined as one mile) of grocery stores, wealthier or whiter households within walking distance of stores experience fewer disamenity land uses along paths to their nearest store. The same relationships hold for walking distances to elementary schools.

Citations

As one of the world’s top destinations, the city of Paris has numerous iconic spaces and imageable landmarks. It has chosen to conserve the historical form of Haussmannian boulevards and buildings by keeping strict controls over renovations and demolitions and promoting modern high-rise development in separate areas outside the old city, such as the La Défense business district. Ahead of the 2024 Paris Olympics Games, there have been continuous attempts to re-enchant the city’s spaces in a respectful way for the city’s identity—for instance, the famed street Champs-Élysées will be revamped with more trees and pedestrian areas. Meanwhile, tension against change has also arisen as in the example of Réinventer Paris, an urban renewal campaign launched in 2014 that aimed to sell or concede 23 underused public properties to the proponents of selected visions on innovative design or use of those spaces. While its several proposals are being realized and the concept of an open-ended competition platform for innovative ideas was spread out to other global cities, the initiative was impeded due to the criticism of the privatization of public lands. Given that both sides of conservation and renovation pursue keeping the city’s charm that attracts the most visitors from all over the globe, the question on existing attractions’ status quo comes up importantly.

This paper aims to investigate the distribution and typologies of current attraction spots in Paris using big data from social media platforms and will be conducted in four steps. Firstly, the Application Programming Interface (API) data from Twitter will be used to identify the location of attractions where many tweeting activities take place. Secondly, machine learning sentiment analysis will be used to filter only positive tweets and corresponding spots. Thirdly, Open Street Map (OSM) data will be utilized to align filtered dots of positively tweeted locations with the footprints of buildings and lots. Lastly, Google Street View (GSV) images collected from these locations will be analyzed using the image classification technique of Visual Artificial Intelligence (Visual AI) to deduce certain categories to that attractions’ images commonly correspond.

Through these processes, the physical typologies of the top attractive places, including parcel morphology and architectural style, will be found. The strengths of utilizing social media big data are that tracking periodical results are enabled, and that the same process can be repeatedly implemented for any other city with the available Twitter, OSM, and GSV data. This paper presents a novel way of analyzing a city’s attractive places and their common characteristics based on social media data, with the methodology combining several techniques developed in preceding studies in the fields of big data, spatial analysis, and AI. The findings of this analysis tool will be a reference providing useful insights for urban planners and policymakers to enhance the city’s

Key Words: pedestrian quality, land use, GIS, OpenStreetMap, 15-minute city

ANALYZING THE TYPOLOGIES OF ATTRACTIVE PLACES BASED ON SOCIAL MEDIA DATA
Abstract ID: 689
Individual Paper
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attraction and preserve its identity.

Citations


Key Words: urban attractiveness, spatial analysis, big data, machine learning, Paris

MINING HUMAN ACTIVITY PATTERNS THROUGH PASSIVE WIFI SENSING FOR PUBLIC SPACE ASSESSMENT: A CASE STUDY OF UNIVERSITY CAMPUS

Abstract ID: 720
Individual Paper

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An assessment of people’s activities and behavior in public spaces serves as a basis for understanding and improving the design and management of these spaces to better meet the needs of the community. Once chosen, public space researchers have categorized the variety of activities into subtypes to gain valuable insights when they observe the complex and ever-changing space. For example, Gehl (2013) suggested three different types of public life—necessary, optional, and social activities—and connected them to the physical quality of space; while necessary activities happen regardless of the quality provided, the optional activities are dependent on good quality space being provided.

Despite their importance, many applications adopting advanced technologies still remain to measure simple human mobility metrics, and footfall counts. Passive WiFi sensing is one example of such technology, which is considered an alternative tool to generate massive mobility data by collecting the packets from a WiFi device carried by a person without requirement. It has been introduced in various urban public areas such as downtowns (Y. Zhou et al., 2020), streets (Šimara et al., 2020), and parks (Hu et al., 2020), quantifying and visualizing the number of people around the sensor or the flow volume between the sensors. It is a clear advantage to be able to generate information on people’s mobility on a large scale over a long time. However, they do not deal with mining different types of activities to get specific knowledge to determine whether public spaces serve the needs of people in detail.

In this study, we aim to fill this gap by adopting trajectory data mining into the WiFi data. Specifically, we classify WiFi trajectories into different two main categories: necessary activity (e.g., attending class) and optional activity (e.g., sitting and resting for a while) based on Jan Gehl’s types of outdoor activities. With the deployment of 26 WiFi sensors, we collected all anonymous WiFi signals on the UNIST campus over 26 days. During that period, GPS
logs of 100 participant students were recorded as ground truth datasets. Totally 4721 GPS trajectories are tagged by manual coding whether it is necessary or optional activities. By extracting features from the WiFi data matched with the time and person, we built a model to classify each WiFi trajectory based on sequence inference models. The model was used further to unlabeled trajectories to understand human activities on campus. It presented which space is sticky as a ratio of each activity, as well as the spatiotemporal distribution of activities.

In contrast to prevailing approaches that rely on footfall counts, this study has successfully implemented extended observations of public spaces to discern different activities. Most studies were not accessible because there was no ground truth such as GPS logs. This approach has facilitated investigations into spatial preferences of diverse behaviors, identification of the primary function of individual spaces, and evaluation of the compatibility between spatial usage and design schemes, all in support of promoting the more precise design of walkable spaces.

Citations


Key Words: Human activity patterns, WiFi sensing, Public space assessment, Smart cities

SMALL-AREA POPULATION FORECASTING OF SHRINKING CITIES IN SOUTH KOREA: USING SHAP (SHAPLEY ADDITIVE EXPLANATIONS) ALGORITHM

Abstract ID: 745

Individual Paper

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Since the population is an essential element to establishing public policy, population forecasts are widely used for various purposes in the planning sector. In particular, small-area population forecasting can be used as useful information for public policy or local government. The rationality of policies and plans at national and regional levels depends on good predictions of the future population. However, most of the population estimates published by the national and statistical offices do not clearly predict the population distribution in small areas and have the problem of overestimating the population in small areas. Since over-estimation of the population causes social losses such as inefficient allocation of resources, it is necessary to develop a model that can clearly predict the population structure of small areas.

The purpose of this study is to identify the utility of XAI in forecasting small-area forecasting. This study was conducted between 2010 and 2040 in the local districts of Korea. This study compared the research results by additionally performing traditional statistical models and general machine learning techniques. The explanatory variables of the regression equation used in this study are largely divided into demographic characteristics, socio-economic characteristics, transportation characteristics, and natural environment characteristics. Demographic characteristics include population density, youth population ratio, elderly population ratio, and fertile women ratio. Socio-economic characteristics include the percentage of high school graduates, the percentage of bachelor’s graduates, the percentage of manufacturing workers, the percentage of agricultural workers, the percentage of service workers, the percentage of old houses, unemployment, and average household income. Transportation
characteristics include the percentage of commuters on public transportation and the degree of proximity to work. Natural environment characteristics are the proportion of green spaces in the park. We used the grid unit population index of the National Geographic Information Institute of Korea.

The SHAP (XAI) model estimates the nonlinear dynamics between variables, and increases the explanatory power of the model by presenting contributions between each variable. As a result of the analysis, it was found that household income, the ratio of old houses, and the ratio of park green areas showed a high contribution to accurate prediction of the population in small areas. This result can be interpreted as the rate of increase or decrease in the population of a small area is greatly affected by the socioeconomic and natural environmental characteristics of the region. The XAI model showed the lowest MAPE value which was performed to evaluate the accuracy of the population prediction results. Based on the results, we can present the following urban planning implications. In Korea, where the population is constantly decreasing, it is helpful to create a green infrastructure in the region to recover the population growth rate. Building a positive image of the region through community-driven regional redevelopment projects will also contribute to mitigating the population migration rate.

Citations


Key Words: Small-area population, Machine learning, Forecasting

MAPPING ‘VERNACULAR’ BUILT ENVIRONMENTS: BRIDGING THE SEMANTIC GAP THROUGH URBAN MORPHOLOGY

Abstract ID: 779
Individual Paper

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The semantic gap in image analysis is the lack of coincidence between the information a user can extract from the visual representation of an object and their own interpretation of the same object. Geospatial data – intrinsically a visual representation – normally simplifies the landscape it represents to convey a subset of information essential for practical or scholarly purposes. As a result, spatial data is produced in multiple layers to capture the complexities of the landscape, and to reduce the semantic gap. In the Global South, regions outside main cities lack access to multiple layers of geospatial data needed for planning efforts. Furthermore, built environments in these regions are largely vernacular. They are constructed without the intervention of a trained architect or a designer expert. They retain some urban and architectural historic heritage, negotiate technological and economic limitations, while aspiring for modernity and comfort. The physical characteristics and land uses in vernacular built environments are complex.

Scholarly or governmental efforts to spatially document these regions strive for efficiency by prioritizing Land Cover Land Use (LCLU) maps to cover the largest possible surface and deliver actionable data. LCLU’s are generated using satellite imagery analysis and standard classification conventions such as the International Geosphere-Biosphere Program IGBP Land Cover Classification System and COoRdination of INformation on the Environment (CORINE). While efficient, there are two main shortcomings of LCLU’s that widen the semantic gap in the Global South:
1. LCLU classification systems are largely developed for natural resource management. They tend to have multiple classes that distinguish natural and cultivated landscapes (waterbodies, forested areas, agriculture, arid lands) but fewer classes to distinguish the built environment. In regions with low access to spatial data, LCLU maps are rarely complemented by other comprehensive datasets detailing the built environment. This imbalanced representation leverages the region’s extractive value and overlooks its towns and the needs of its citizens.

2. The few built environment classes in LCLU systems tend to describe the primary human use (residential, commercial, industrial, governmental) of the land. In many vernacular environments, land uses are mostly mixed even in low-density areas. In other words, classification systems are not equipped to capture the different types of built environments.

The research question in this paper is: How can a Land Cover Land Use classification system balance legibility and specificity to efficiently represent vernacular built environments for regions with low access to spatial data?

This paper describes an analysis workflow that integrates urban morphology analysis techniques with mapping techniques, utilizing towns in central Beqaa Valley (Lebanon) as a case study. Data points are collected in the field using ESRI survey123 (n=400), and analyzed using five morphological criteria (density, street type, open space, architectural heterogeneity, and land use heterogeneity) to synthesize an alternative LCLU classification system specific to the Beqaa. The proposed LCLU system balances specificity and legibility: it retains the same hierarchical structure and much of the nomenclature observed in LCLU conventions yet distinguishes between different built environments. Finally, the paper demonstrates how this classification system can be applied to using remote sensing data using PlanetScope Imagery (3 M resolution) and Object-Based Identification Analysis through Trimble Ecognition and ArcGIS.

The workflow is intrinsically sensible to the cultural specificities of the built environment but also lends itself to participatory planning, especially in synthesizing the various classes to be listed in the LCLU system. This can aid communities in generating spatial knowledge that reflects their perceptions of their built environment and advocating for their priorities. It can also serve national or regional planning efforts by guiding town-specific planning strategies and reducing the need for complementary data.

Citations


Key Words: Geospatial Analysis, Morphology, Middle East, Vernacular, Mapping

SIMULATING PARCEL-LEVEL LAND DEVELOPMENTS UNDER DIFFERENT SEA-LEVEL RISE SCENARIOS USING A MACHINE-BASED LAND-USE CHANGE MODEL

Abstract ID: 785
Individual Paper

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The global temperature has increased twice faster since 1980 compared to previous decades (NOAA National Centers for Environmental Information, 2021). The global sea level rose at an average of 1.7 millimeters per year between 1900 and 2009, while the rate has accelerated recently. In recent years, such conditions have increased the risks of coastal areas for extreme natural events such as hurricanes, coastal erosions, and sea-level rise (SLR). Climate change is likely to increase gentrification and socio-economic disparities in coastal areas. Coastal areas are vital for habitat, human life, and the economy. Approximately 42% of the U.S. population resides in coastal counties (Fleming et al., 2018), while the coastal population has increased by 15.3% since 2000 (Cohen, 2019). Extreme flooding driven by strong storm surges causes catastrophic damage to the built & natural environments and local & national economies. The impacts of SLR on urban development have not been thoroughly studied. Catastrophic events increase the public’s awareness of natural hazards, while some risks might already shape coastal built environments.

In this study, the main goal is to simulate future parcel-level land developments in Miami-Dade County under the number of SLR scenarios provided by the National Oceanic and Atmospheric Administration (NOAA) using a machine learning (ML) based land use change (LUC) model. NOAA’s SLR scenarios provide potential submerged coastal areas. Miami-Dade County is the most densely populated urban area in Florida, and the county expects to lose parts of coastal areas due to the rising sea levels. The county is surrounded by mainly environmentally-sensitive areas. Therefore, many inland communities will face displacement pressures as a result of relocations of coastal properties. The countywide parcel database comprises approximately half a million unique parcels and contains parcel-specific information. Historical conditions of land developments between 1940 and 2020 were derived using the actual construction year information.

LUC modeling is a widely used approach to predict future land developments. Such models mimic the complexity of land development dynamics. ML methods like ensemble learning algorithms can account for complex non-linear relationships and are preferred for prediction. Incorporating spatial and temporal dependencies in ML-based LUC models significantly improves the prediction accuracy scores (Kim et al., 2022; Tepe & Safikhani, 2023). ML-based spatio-temporal LUC models are the ideal candidate for simulation-based approaches, such as Cellular Automata (CA). Because the method can be used to address misspecifications of transition functions in CA-based LUC models (Gounaridis et al., 2019; Liu et al., 2021; Xing et al., 2020). In this research, potential changes in land developments under five SLR scenarios are simulated using an ML-based CA model incorporating spatial and temporal dependencies. We apply the weighted XGBoost method to deal with imbalanced land use classes. Our model is trained over 80 years of data to learn long-term adaptation patterns to sea-level changes. The training data set includes information about location-specific, proximity, neighborhood, socio-economic, environment, flood risks, and relationships with coastal areas. Simulations will show potential parcel-level changes in short- and long-term horizons and allow us to identify vulnerable communities.

Citations

A ROBOT PLATFORM FOR HIGH-RESOLUTION BIRD’S EYE VIEW SIDEWALK MAP CREATION

Abstract ID: 788
Individual Paper

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Sidewalk conditions at the microscale have impacts on physical activities more directly. Improving the micro-scale environment is more cost-effective and efficient for creating activity-friendly environments.

Emerging Street View Images (SVI) provides researchers and city planners with an alternative dataset for collecting micro-scale built environments safer and more efficiently. However, SVI covers a limited number of cities and a limited area of those cities, making it difficult to get the most up-to-date Street View information even though they have been working to increase coverage and update frequency in recent years.

Mobile sensors are used to map urban built environment with higher location accuracy and higher resolution. Depth camera and LiDAR are used to construct 3D surfaces of sidewalks and to evaluate surface quality. Onboard mobile acceleration sensors are used to collect sidewalk anomalies. However, the research only focuses on one specific sidewalk condition measurements, which makes it not reusable for comprehensive information extraction. The lack of 2D colored images also limits the implementation of these data collection methods in comprehensive sidewalk evaluation research.

To overcome the shortage of existing sidewalk condition datasets and data collection techniques, this study proposed a robot platform and an algorithm with the ability to create colored high-resolution bird-eye-view sidewalk maps. Compared with using homography to transform the image to ground planar, the proposed algorithm will not distort objects above the ground planar. The proposed platform is a Clearpath Husky robot, equipped with a localization and navigation module (a Lidar and an IMU sensor), an Azure Kinect Depth Camera, and an onboard control system. The Lidar and IMU sensors are used to localize the robot and the depth camera is used to capture the RGB-colored sidewalk images and the corresponding 3D point clouds. An algorithm is developed to transform RGB images to bird-eye-view maps and stitch them together to keep the geometry and localization information. The contribution of our platform will be:

1. Provide a comprehensive sidewalk map for researchers and city planners. The dataset will have a high resolution (~5cm), which provides much more detailed features to researchers than existing datasets.

2. Our dataset will provide researchers with new topics. The dataset will keep the geometry characteristics for objects on sidewalks. Topological features of sidewalk infrastructures at micro-scale can be extracted from our dataset, whose relationship with pedestrian behaviors has never been researched.

3. The platform is capable of creating sidewalk maps on a large scale. With the development of autonomous driving technique, the robot will have the ability to create sidewalk maps automatically.

Citations
FIRST TO ADOPT MOBILE PAYMENT IN TRANSIT: WHO, WHEN, AND WHERE
Abstract ID: 795
Individual Paper

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Emerging technologies, such as mobile payment, have brought about evolutions in various sectors of urban services but also come with concerns like digital divide and inequity in cities [1, 2]. Since public transit systems, especially metros, are essential parts of urban systems, adopting mobile payment in public transit systems is a case in point that would affect sustainable development, the efficiency of urban life, and social equity in cities [3]. However, existing studies on this topic are largely based on survey data, which examine individual riders' acceptance and usage in mobile payment and their impact factors [4]. Given the nature of survey data, they mostly are limited in small samples and focus on transit riders' static behaviors or preferences in space and time. Little research concerns the heterogeneity in spatial and temporal distributions of transit riders' behaviors and their relationships with station-area development, which should reflect the uneven digital adoption across geographies and demographics. To address this gap, we used two separate weeks of smartcard data before and after the formal introduction of mobile payment in Wuhan, China, to provide a spatiotemporal analysis of mobile payment adoption behavior in the transit system. The large-scale data (~3 million daily) was generated by the automatic fare collection system, which can reveal the dynamics of mobile payment adopters in the system [5]. Our research question is who, when, and where are those early adopters of mobile payment in the transit system. We examined the impacts of the introduction of mobile payment through two analyses: (1) we examined changes in travel patterns of different rider groups and revealed who the mobile payment adopters potentially were before the system adopted mobile payment technology; (2) we used t-test and geo-visualization approaches to explore the spatio-temporal features of early adopters of mobile payment in public transit. Our major findings are: (1) mobile payment adopters were potentially former smartcard users rather than temporary ticket riders; (2) compared to loyal riders, mobile payment adopters were more likely to travel in peak hours, for shorter durations, and at lower frequencies; (3) mobile payment adopters were more likely to travel in city centers rather than suburbs. The findings indicate that the mobile payment adoption might improve the convenience of essential metro use and promote the efficiency of peak-hour and dense-area services in cities. The use of mobile payment distributed heterogeneously across locales and population in the city, which infers the inequality in people's demands and capacities to approach such new technologies in the city. Our research results can inform both
transit agencies and urban planners of who, when, and where to target their efforts in promoting mobile payment adoption and conduct fine-scale policy making.

Citations


Key Words: Public transit system, Mobile payment technologies, User acceptance, Spatio-temporal analysis

PREDICTING GROUNDWATER CONTAMINATION TO GUIDE TESTING AND MITIGATION IN A DATA SCARCE RURAL ENVIRONMENT
Abstract ID: 810
Individual Paper

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More than one million households in Virginia rely on wells, springs, and cisterns for their drinking water supply. While there is widespread perception that well water is safe, the quality of drinking water in Virginia homes that use private wells varies widely. Lead levels in homes supplied by private wells are influenced by the chemistry of the groundwater due to geology and the make-up of plumbing components. Lead is a pervasive environmental contaminant with well documented adverse health effects. Groundwater in the Piedmont—where Fluvanna, Albemarle, Nelson, and Buckingham counties (i.e., the study region) are located—is particularly corrosive, leading to higher incidence of lead contamination even in relatively new homes. Unlike homes served by regulated municipal water supplies, maintenance and monitoring of these systems is solely the homeowner’s responsibility. Given that the burden of testing and maintenance is privately held (i.e., the responsibility of residents), community members and researchers hypothesize that water contamination may disproportionately impact people of lower socioeconomic status—which correlates with racial minority status in the region studied. A series of pilot studies based on water quality testing of samples drawn from homes in the region has supported this expectation. The central research question motivating this study is “how can predictive models be used to inform groundwater testing and remediation initiatives in rural areas where data are scarce” and potentially replicated within similarly situated rural areas outside Virginia. We apply a machine learning approach to model the relationship between selected water contaminants and a variety of predictors derived from structural characteristics, land use, soil, and geologic factors within the immediate vicinity at the scale of the individual housing unit. The trained models are then used to predict which untested housing units in the study region are most likely to have drinking water that exceeds regulatory thresholds for selected contaminants. Next, we use spatial statistics to identify “hotspots” where model predictions exhibit clustering of housing units with a higher probability of exceeding acceptable thresholds for drinking water contamination. Finally, we map the clusters of
housing units with higher predicted probability of contamination alongside demographic and economic indicators in order to begin examining the equity implications of this issue. This exploratory research highlights a role for predictive models in targeting scarce testing and remediation resources to those housing units and resident populations that are at greatest risk of negative health impacts and builds upon an ongoing initiative led by Virginia Cooperative Extension.

Citations


Key Words: machine learning, drinking water, spatial statistics, rural communities

MOBILITY DATA REVEALS THE TRADE-OFF BETWEEN SUSTAINABILITY AND SOCIAL SEGREGATION IN THE 15-MINUTE CITY

Abstract ID: 842
Individual Paper

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Urban policies are now embracing new models of urban living that reject the outdated car-centric model and instead prioritize proximity and active forms of transportation in order to reduce emissions from urban travel. The increasingly-popular “15-minute city” model, in which residents’ daily needs can be met within a short walk from home, exemplifies this shift. The 15-minute city model not only aims to reduce transport emissions but also to revitalize social life in neighborhoods by bringing everyday activities closer to home. However, the feasibility and socio-environmental implications of reshaping cities around walkable amenities are uncertain, and current proposals for implementing the 15-minute city model lack measurable indicators to demonstrate the effects of proximity to amenities on travel behavior, raising concerns about the model’s viability.

Existing literature is thus not able to capture key discrepancies between access to and usage of local amenities and may provide misleading evidence about the state of local living in the US. Further, previous studies have been unable to address the potential drawbacks of a 15-minute city model; namely, that more local living could exacerbate socioeconomic segregation.
In this study, we present the first comprehensive analysis of the state of local living—defined as the share of trips made within a 15-minute walk from home—in more than 400 urban areas across the US using GPS data that describes individual travel patterns of over 40 million mobile phone users. We anticipate that our index can serve as a point of departure for critical environmentally-focused policy interventions in the future. Using our index, we find that currently, urban areas in the US are far from the 15-minute city ideal: the median US city resident makes only 12% of daily trips to basic amenities locally. However, there is considerable regional and socioeconomic variation within the US.

The strong correlation between access to amenities within a 15-minute walk from home and usage of those amenities, which is robust to a variety of controls, provides initial evidence to support the hypothesis that underlies the 15-minute city model: that local living is determined by access to local amenities. Furthermore, using an approach that leverages variation in access created by the 1961 New York City Zoning ordinance across New York neighborhoods, we provide evidence to suggest that this relationship is causal and that less restrictive zoning rules, such as permitting more mixed-use development, could lead to shorter travel times, curbing travel-related emissions and encouraging more sustainable transport modes.

Finally, we find that more localized trips and more access to local amenities are associated with higher levels of experienced segregation only for low-income residents, likely because opportunities for higher-income social interactions in most cities are located away from low-income neighborhoods. Thus, one consequence of implementing 15-minute city planning principles may be the increased isolation of the poor.

The findings presented in this study contribute to our understanding of the mechanisms behind urban travel patterns and underscore the value of mobility data for addressing environmental and social sustainability in cities. Taken together, our results suggest that the planning strategies embodied by the "15-minute city" could reduce trip lengths, but such policies also run the risk of increasing the social isolation of the poor. This tradeoff, which would be difficult to uncover using smaller-scale travel surveys or transportation models, highlights the value of using large-scale behavior data in order to understand how people use cities. Moreover, our work offers a simple empirical framework that could be used for policy evaluation of urban interventions that promote sustainable mobility and shorter trips.

Citations


Key Words: 15-minute city, Sustainability, Walkability, Travel Behavior, GPS Data
Major social changes stem from policies that their developments heavily rely on public participation in the decennial U.S. Census. Increasing the accuracy of population counts is essential to ensure the equitable distribution of resources (IDHS 2020). For individual states, the population counts determine representation in the U.S. House of Representatives and the amount of federal funding each state receives, leading to state outreach efforts to encourage participation in the census (Datta et al. 2012). According to the U.S. Census Bureau, Illinois has had seven consecutive years of population loss, which is the most prolonged decline in the state’s history. From the 2010 Census to July 2020, the State population has declined by 243,102 residents, which is also the most significant population decline of any state since 2010 (U.S. Census Bureau 2020).

The present empirical study uses advanced data collection technologies based on a user interface (UI) and machine learning techniques (k-means clustering, random forest, gradient boosting) to analyze the effectiveness of the outreach activities organized by the state of Illinois. In this research, we seek to explore how outreach activities influenced the population response rate to the 2020 Decennial Census. Our study answers two major questions: (1) What outreach activities were most effective in boosting public participation in the 2020 Census in the State of Illinois? (2) To what extent does the effect of outreach activities vary among different geographic locations and communities? We assess various types of outreach activities in different geographic areas with distinct socioeconomic and demographic characteristics (Shin et al. 2022). The core objective of this study is to identify the most important or effective outreach methods while accounting for geographic and socio-economic characteristics. Socio-economic characteristics such as racial composition (e.g., white majority vs. Black or Hispanic majority neighborhoods) or household income (e.g., wealthy vs. low-income neighborhoods) could differ in the impact of specific outreach methods.

Findings from the models in this study show that outreach activities classified as “direct engagement (1-on-1)” and “single events” bear the highest impact, especially in predominantly low-income minority communities in metropolitan areas. However, socio-demographic characteristics are found to be generally more influential on response rates than outreach activities performed in the area, and in many underperforming areas, a high number of activities does not correlate with an increase in response rates. Given the lack of empirical academic studies analyzing the effectiveness of census outreach activities and their impact on the final census response rates (Bates et al. 2011), future census efforts should include data collection about the location, type, and reach of outreach activities and make it publicly available to increase the overall number of studies and produce generalizable knowledge to inform the design of outreach campaigns. Events such as the 2020 Census have demonstrated the importance of integrating social services into all community and planning activities in between census efforts, including but not limited to access to the internet, housing, economic and workforce development, and transportation to strengthen the social capital that ultimately supports greater community engagement.

The results, methods, and findings are relevant for public campaigning efforts in general and census efforts in particular, where community outreach is a significant part of the process. The evaluation of activities lies at the core of this research, so careful data collection and data wrangling should be performed before to ensure meaningful analysis. Findings about the importance and success of specific activities for different types of geographies and demographic groups, as well as the methods used to assess these impacts, could be applied to
both government- and private-sponsored efforts in different countries and the U.S.

Citations


Key Words: public policy, 2020 Census, outreach activities, machine learning, user interface technologies

THE VOICES BEHIND CONGESTION PRICING: UNVEILING THE SOCIAL BACKGROUNDS OF SUPPORTERS AND OPPONENTS THROUGH A LARGE LANGUAGE MODEL

Abstract ID: 875
Individual Paper

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Congestion pricing has been a widely debated tool in the academic community, and its implementation often faces considerable resistance. In 2007, former New York City Mayor Michael Bloomberg suggested congestion pricing to alleviate traffic congestion. After more than a decade of revisions, the final proposal was approved in April 2019, but the public’s acceptance remains the main obstacle, leading to divergent reactions and ongoing disputes.

Individuals with lower socio-economic status (SES) may struggle to have their voices heard in public discourse due to limited access to resources and networks. Social media platforms like Twitter offer an opportunity to explore diverse views of these suppressed voices on transportation policies like congestion pricing.

GPT 3.5, a transformer-based large language model introduced by OpenAI, has recently gained researchers' attention due to its impressive capability and efficiency. The GPT model holds a slight advantage over conventional natural language processing models in text-based tasks, such as sentiment analysis and keyword extraction. However, its greater advantage lies in its ability to infer deeper hidden information within text, like SES. Conventional models often require large training sets to analyze complex inference problems, and their generalizability remains relatively low. In contrast, the GPT model benefits from massive text training in earlier stages, enabling users to make accurate inferences with a small quantity of their own dataset.

This study aims to examine the involvement and sentiment of various stakeholders in the discourse of NYC's Congestion Pricing by utilizing the GPT model to analyze tweets. The study will primarily answer three research questions: 1. Is there support or opposition to congestion pricing on social media? 2. What is the SES of the supporters and opponents? 3. What are the major arguments of the stakeholders with different SES?

To conduct the study, all tweets related to "NYC Congestion Pricing" from April 1, 2019, until the present were retrieved using the Twitter API. The collected tweets and account information were input into a refined GPT-3.5 turbo model for three tasks: 1. Analyze each tweet’s sentiment regarding congestion pricing. 2. Speculate on the
profession of personal account owners and the entity of organizational account owners from the account name, verification status, account bios, and all historical tweets. Extract the topic words from different population groups. A manually labeled test dataset (n=498) validated sentiment analysis with 81% accuracy. A Person's Chi-Square Test assessed the association between account owners' social backgrounds and attitudes towards congestion pricing.

During the study period, 1,407 different authors originated 2,386 related tweets. 28% of the tweets favor congestion pricing, 10% oppose it, and the remaining 62% are neutral. Organizational accounts are proportionally larger among supporters (32%) than among opponents (14%), and they tend to post their opinions multiple times and have more retweets. Politicians are significantly overrepresented among the opposition, while media and nonprofit organizations hold more supportive positions. The third task extracts distinct topic words from the tweets, with supporters emphasizing "Tolling, Traffic, Pollution, Transit, and Exemptions" and opponents focusing on "Tax, Toll, Commuters, Working Class, and Rally."

Previous literature on social media analysis was often limited to sentiment analysis and topic word extraction. In addition to improving accuracy, this research utilizes the broad capabilities of the GPT model to explore how planning research can extract more complex social information from social media data. It provides a new inspiration for participatory planning, where planners can use this new method to proactively explore the voices of suppressed and marginalized groups, in addition to encouraging them to participate in planning.

Citations


Key Words: Congestion Pricing, GPT, Social Media, Machine Learning, Public Inputs

MAPPING AND QUANTIFYING URBAN MORPHOLOGY METRICS FOR SEA LEVEL RISE ADAPTATION STRATEGIES IN ST. AUGUSTINE, FLORIDA

Abstract ID: 924
Individual Paper

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Sea level rise (SLR) poses a significant risk to urban areas located near coastlines. The SLR is projected to be 0.9 m with the potential to inundate 4.2 million people by 2100 in coastal counties of the USA. In recent years, there have been many plan strategies proposing sea level rise adaptations. For example, Miami-Dade County released a specific SLR Strategy, and adaptations related to urban planning and Nature-based solutions (NBS) including expanding greenways and blueways. As a critical driver of sea-level rise adaptation, NBS can be quantified with urban morphology to measure if the urban form is designed to capture the multiple benefits that NBS can provide, such as improving urban microclimates, enhancing biodiversity, and increasing carbon sequestration. With
adoption of a range of indicators and metrics in urban morphology research, it could help policymakers, urban planners, and other stakeholders assess and monitor the impacts of sea level rise on urban morphology change.

First, this paper aims to map and quantify the urban morphology change caused by the sea level rise in St. Augustine, which is a historical city on the northeast coast of Florida. The way in which the city was constructed make it vulnerable to sea level rise. Second, new urban morphology metrics in both 2D and 3D levels will be proposed in this paper. By utilizing Lidar data, the 3D metrics can be calculated, leading to more precise and comprehensive outcomes. Finally, provide valuable perspectives on risk evaluation and guide the development of adaptation strategies aimed at mitigating vulnerability and protect the lives and livelihoods of the people in urban areas. Furthermore, data analysis models will be adopted to evaluate the proposed metrics for measuring performance and predict future trends of sea level rise impacts. Overall, the method and results proposed in this paper could be utilized to other study areas as a reference for sea level rise adaptation analysis.

The following are some of the metrics that will be calculated in this paper:

Visual accessibility index: This a useful metric for assessing the visual impact of sea level rise. View shed analysis can be used to evaluate the potential impacts of sea level rise on existing views and landmarks, which can be important for maintaining the cultural and aesthetic values of a place.

Street network: The number and connectivity of streets can indicate the level of accessibility and mobility within the urban area. If there is flood, the street network can provide evacuation routes and serve as drainage system for stormwater runoff.

Green space density: The amount of green space, such as parks, urban forests, and wetlands. They can act as not only a natural sponge by absorbing and retaining floodwater, but also natural barriers to storm surges and high tides.

Urban accessibility: Urban accessibility is important for ensuring that all residents have access to essential services and resources. In the context of sea level rise adaptation, accessibility must be considered in relation to social equity.

Urban height index: Buildings can be designed to be elevated above the flood zone, reducing the risk of flooding, and allowing residents to remain in place during a flood event. Meanwhile, building height index can also be used as a measurement to mitigate the urban heat island effect.

The ratio of open space and building footprints: The ratio can promote community resilience when sea level rises. By increasing the amount of open space in low-lying areas, the vulnerability of buildings and infrastructure to flooding and erosion could be reduced.

Citations

LAST-MILE DELIVERY WAREHOUSING AND COMMERCIAL GENTRIFICATION: 'DARK STORES' AND THEIR IMPACT ON NEW YORK CITY NEIGHBORHOODS
Abstract ID: 927
Individual Paper

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Urban platforms form interfaces between existing networks, reducing friction in the exchange of goods, services, and information, making city life more efficient for some residents at the expense of others (Sadowski, 2020). While urban platforms have inserted themselves in almost all essential processes of city life and affect urban rent contours (Stehlin, 2018), the profit-making objectives of these companies do not make for open and collaborative research subjects. The equally invisible layer of digital infrastructure shaped by these platforms makes life easy for a part of the population, while various sections of society are either excluded or adversely affected due to their race, caste, class or gender identities. In this paper, I have attempted to ‘make present’ (Thatcher & Dalton, 2022) the on-ground infrastructure of online instant delivery platforms in New York City, using forms of data produced by these platforms in conjunction with socio-demographic and land use data, textual analysis, and direct observation.

‘Dark stores’ are semi-open-to-public food warehouses, scattered throughout the city with the goal of fulfilling 30-minute deliveries. While they are located on land zoned for commercial use, they seldom meet the standards for the average grocery shopping experience. Their primary purpose is to act as a warehouse, located within delivery distance from their customer base. The aim of this study is to shed light on the legality of these stores with respect to zoning, to reveal how their locations are related to that of their user base, and to investigate the “shadows” cast on these neighborhoods. Retail food store data from data.ny.gov, zoning boundaries from the NYC Department of Planning and American Community Survey data have been used along with a digital survey of historical Google Street View data and media generated by these platforms to meet these objectives.

Preliminary findings reveal that fewer than 20% of these ‘stores’ are located on land zoned for warehousing uses. The retail display is either used to advertise the online platform or covered up with elusive branding features, both equally unwelcoming to the walk-in consumer. Most are located within lower income census blocks, transforming commercial spaces that could be serving their immediate neighbors into back lots of consumerism for wealthier residents. It is important to ask whether these services accentuate existing socio-economic divides by bringing a form of convenience that only some can afford at the cost of the convenience of the many. This contribution casts a critical upward gaze at digital platforms by repurposing their data traces to interrogate their effects on urban form and political economy.

Citations


Key Words: Urban Platforms, Dark Stores, Digital Infrastructure

PARTICIPATION AND THE PLATFORM: DELIBERATIVE ANTIPATTERNS IN DIGITAL PARTICIPATORY PLANNING
Abstract ID: 928
Individual Paper
Across Canada, participation in local planning and policymaking processes is increasingly mediated through what I call dedicated digital engagement platforms (DDEPs). DDEPs are multifunctional online engagement hubs primarily deployed by local governments and designed to facilitate collaborative decision-making. Most often offered through a proprietary subscription-based software-as-a-service model, these platforms are part of the broader commercialization of deliberative democracy, becoming essential tools in a growing public engagement industry (Hendriks & Carson, 2008; Lee, 2015). Through the development of a database of DDEP adoption across the country, supported by case studies, interviews, and digital ethnographic inquiry, this research establishes and critically examines the growing trend of the platformization of participatory planning in Canada. My study quantifies DDEP adoption across the country through an analysis of all local and regional governments serving populations over 5,000. Of the 839 communities included in the database, my findings indicate that nearly two-thirds of Canadians reside within a local government jurisdiction that utilizes a DDEP hub for participatory governance. And in a consolidation of this platformization, most of those communities (well over 80%) have adopted the same commercial DDEP provider.

The data presented in this study adds to research that has found that digitally mediated participation in democratic planning processes has been growing steadily over the past decade or more (Potts, 2020; Wilson & Tewdwr-Jones, 2022). But there is limited research examining the DDEP platform type. Furthermore, much of this emergent digital turn in planning scholarship is focused on functionality and practical implementation questions for digital participatory technologies, with evaluative metrics and any theoretical framing arranged around how these tools can help or hinder the deliberative democratic goals of participatory planning. As such, digital participatory planning has not been fully drawn into the productive debates around theories of participation for democratic planning (Brownill & Inch, 2019). Scholarship exploring digital participation in planning research often takes the deliberative conception of democracy as a given and builds from its corollary of communicative planning theory. There is little interwoven critique of participation itself and a dearth of studies examining whether and how digital tools might replicate or exacerbate the deficiencies of deliberative participative approaches that have been identified by the postpolitical critique and agonistic democratic theorists. This risks, in participatory planning practice, research, and platform design, the replication of long-recognized limitations in deliberative democratic decision-making and communicative planning—a digital deliberative antipattern.

The widespread uptake of the type of digital engagement platform described in this study and the consolidation around a single platform provider, as evidenced in Canada, warrant an expanded critical analysis and the development of new research questions. By integrating agonistic theory and the postpolitical critique, foundational elements of contemporary planning theory, with case studies of local digital participatory planning, this study implements a more critical research agenda for examining the platformization of participation.

Citations


Key Words: public participation, digital participatory planning, communicative planning, postpolitics, agonism
Research indicates that individuals residing in urban areas experience high-stress levels, so cities require urban spaces that promote relaxation and stress reduction (Gruebner et al., 2017). Through extensive research using social media microblogs (tweets), Dutt points out that urbaneness or unique physical characteristics of urban areas are not responsible for increased stress levels in urbanites. On the contrary, urban areas create opportunities to socialize and destress (Dutt, 2021). The real detriments are a lack of access to urban facilities, poor socioeconomic conditions, and lacking a sense of safety. Among various stressors, loneliness and lack of opportunity to engage in active or passive interaction with people increased mistrust, leading to a higher perception of stress and increased reliance on people-nearby applications (PNAs) (Procentese, 2019). Social media platforms such as Instagram are used as a PNA and to explore locations where urbanites can meet new people. Gatti et al. indicate that Instagram use enhances people's sense of place and consequently increases a sense of community in urban areas (Gatti, 2021). As sense of community has a clear role in strengthening people's mental health, in this research, I have used geo-located Instagram posts to measure and map user happiness, sense of community, and sense of place at different parts of the city of Huntsville, Alabama. Additionally, through the rigor of image classification, I have mapped the characteristics of the built environment implicit in these images. The research method explored here strives to enhance our power as urban planners to witness the city through the lens of people, especially in a small metropolitan area such as Huntsville.

The hypothesis in this research are:

H1. The sense of place and community measured using the user’s local Instagram posts are positively associated with urban built environment characteristics, such as memorability of space, adjacent land use, point of interest diversity, and sense of safety.

H2. Key similarities exist between the built environment characteristics of the least and most Instagrammed locations.

Considering the inherent limitation in the population sampling of Instagram users and their selection bias of choosing the sanitized version of city images on Instagram (Paül i Agustí, 2021), and a greater inclination to express happiness, we can primality explore the best version of urban spaces in Huntsville. However, to make this research more meaningful, I have captured the maximum possible data within city limits using connected/correlated hashtags and maximizing the geo-located posts through image similarity. Increasing the sample size has not only strengthened the research findings for H1 but also revealed some new places of interest that appeared less frequently yet have some fundamental similarities with the more frequently reported popular places. Mapping similarities reveals how less-known urban areas have the potential to impart a strong sense of place and community to the urbanites as much as their famous counterparts.

The research presents a practical mythological approach to work with publicly curated image and text data—the novelty of using text mining and image classification to score a sense of community. Furthermore, the study has used measures to evaluate mental wellbeing, such as the sense of community and happiness expressed in these social media posts. The implicit information extracted from the publicly available Instagram posts aims to enrich the understanding between the built-environment and mental wellbeing.

Citations
• Dutt, F. (2021). Assessing mental wellbeing in urban areas using social media data: understanding when and where urbanites stress and destress [Georgia Institute of Technology]. https://smartech.gatech.edu/handle/1853/66141

Key Words: Sense of community, Image Classification, Text mining, Built-environmnt, Mental wellbeing

TOWARD AN INCLUSIVE AEROTROPOLIS: HOW CONNECTIVITY INFRASTRUCTURE SUPPORT OR HINDER MOBILITY FLOWS FOR AIRPORT-ADJACENT RESIDENTS
Abstract ID: 983
Individual Paper

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Airports are key stakeholders in global networks. They help regions improve global competitiveness and drive local economy. However, at the micro level, an airport is a large and restricted land use that is difficult for the nearby residents to move around and an ‘infrastructure sink’ that congregates resources to serve aviation and related industries alone without considering the needs of the adjacent communities.

Hartsfield-Jackson Atlanta International Airport (ATL Airport) presents a great context that embodies the conflicting connectivity discourses on a regional versus local scale. For example, ATL Airport is the world’s busiest airport by passenger traffic until 2019, yet only 20% of its workers live by the airport. The disconnected communities nearby the airport are also well below the median income level and host a large African American population. In 2014, Aerotropolis Atlanta Alliance, a nonprofit public-private partnership organization, is established to bring communities together around the airport to collaboratively leverage the airport leadership and development for the welfare of nearby residents. In 2017, Aerotropolis Atlanta Alliance (together with ATL Airport Community Improvement Districts) proposed a AeroATL Greenway Trail plan to improve trail connectivity in the Aerotropolis region and the plan is further funded in 2020. This trail connectivity infrastructure has the potential to alleviate the car-centric traffic around the airport, provide a walkable public space, and connect residents and job locations around the airport.

Under such context, we propose to study ATL airport as a case study to critically examine the current mobility in the area as well as the impact of the AeroATL Greenway Trail plan on airport-adjacent residents. We ask two research questions: 1) what variables can empirically capture the contrasting role of the ATL airport at simultaneously mobilizing regional flows while inhibiting the local flows, and 2) what tools we can develop to help planners and airport stakeholders to evaluate the impacts of the AeroATL Greenway plan to Aerotropolis residents. We will work with Aerotropolis Atlanta Alliance as partners to set our goals, engage with stakeholders, and validate our model and results.
To answer the first question, we will conduct a mobility analysis. Our data come from the Atlanta Regional Commission’s activity-based model (the state-of-the-art regional travel demand model)'s predicted trips. By comparing the direction, diversity, travel mode, and trip purposes of the predicted trips related to the airport and neighborhoods in the Aerotropolis region, we expect to see different connectivity profiles between the airport and neighborhoods.

To answer the second question, we plan to simulate trip and route distributions based on the origin-destination trips data from the activity-based model above. We will measure how the built scenario (with the trail) in the model may increase trip distance covered by trails and expand access to amenity and livable wage jobs in the surrounding neighborhoods. We believe our research will contribute to an inclusive Aerotropolis future in Atlanta and create lessons for airport stakeholders elsewhere.

Citations


Key Words: Aerotropolis, connectivity, origin-destination flows, participatory modeling, walking/biking

PREDICTING NEIGHBORHOOD RACIAL AND INCOME CHANGES USING REAL ESTATE LISTING TEXT AND MORTGAGE LENDING DATA
Abstract ID: 1004
Individual Paper

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Emerging non-traditional data sources and advancements in machine learning are advancing the predictive potential for understanding urban changes in near real-time (Chapple et al., 2022; Dong et al., 2019; Olson et al., 2021), a long pernicious planning challenge (Chapple & Zuk, 2016). Most recent advancements in this line of research have capitalized on data sources that largely depict the commercial landscape of cities: restaurant and Yelp reviews or visitors to a neighborhood deciphered from mobility datasets. Our research investigates the potential for real estate listing data to serve as a bellwether for imminent changes in the residential composition of neighborhoods at a fine temporal resolution. To do so, we use annually collected real estate listing data from the Multiple Listing Service combined with mortgage lending data from the Home Mortgage Disclosure Act (HMDA). Our case study focuses on the fast-growing city of Charlotte, North Carolina using listings from 2001 – 2020. We begin by classifying property listings using their accompanying text descriptions, or public remarks, developed by real estate agents to advertise properties. We use a semi-supervised classification algorithm, Lbl2Vec, to classify listings into 5 types of dwellings along a housing lifecycle continuum of investment to disinvestment (Galster, 1996): disinvestment; opportunity; new suburban; expensive investment; renewed. We then examine how the marketing of properties explains changes in the racial and income composition of mortgage applicants in the following year. To do so, we estimate a model that explains the share of mortgage applicants by different income and racial groups in time t, as a function of the share of properties in a neighborhood listed in each of our five categories, in time t-1. This framework enables us to explore threshold effects needed to predict significant racial or income changes. Our results show that as the share of properties advertised with terms associated with our disinvestment category increases, we see a significant increase in the share of low-income and black mortgage
applicants in the following time period. As the share of properties advertised with terms associated with expensive investment increase, the share of upper-income and white applicants significantly increases. We find a threshold effect with the share of properties advertised as opportunities and increases in white applicants: as the number of opportunity properties increase to represent 70-90 percent of listings in a neighborhood, the share of white applicants increases, but after 90 percent, we see a decline in white applicants suggesting that white homebuyers might be willing to invest in a neighborhood perceived as an opportunity, but not yet revitalized, if there is a critical mass of properties suggesting change is imminent, but not too many, as they may not want to be the first to enter the neighborhood. Our results therefore show the predictive ability of a near real-time dataset like property listings and contributes to literatures on residential sorting and tipping points. It also directly links the words used by real estate agents to advertise properties with significant changes in the racial and income profile of mortgage applicants.

Citations


Key Words: Real Estate Listings, Machine Learning, Neighborhood Change

WHAT'S EVEN IN THE PLAN?: CREATING DATA INFRASTRUCTURE TO MAKE COMPREHENSIVE PLANS FAIR (FINDABLE, ACCESSIBLE, INTEROPERABLE, AND REUSABLE)

Abstract ID: 1030

Individual Paper

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Local land-use plans help guide future development, but it is often difficult to compare content across jurisdictions, making regional coordination and plan evaluation challenging. This research reviews federal, state and local data infrastructure guidance for land-use plans and compares such guidance to compliance with a California use-case. Findings indicate a number of obstacles to fostering data sharing and comparative analysis of plans: there is currently no publicly accessible state-level central repository of local comprehensive land-use plans; plans are not uniform in format and are often out-of-date; many plans are not machine-readable thereby inhibiting text extraction, and planning language varies so greatly that there are numerous synonyms for terms of interest. Nonetheless, we demonstrate that the creation of digital platforms for archiving and searching across plans is currently feasible and enables large-scale quantitative analysis. Based on currently available metadata in existing land-use plans, we designed and piloted a structured database to enable users to search for terms and phrases across over 500 land-use plans. To center issues of social equity, the open access platform was developed in collaboration with state agencies and community organizations focused on environmental justice. Based on the pilot, we conclude with a framework for both developing plan data infrastructure given current constraints in standardized plan metadata and availability as well as guidance for plan formatting using FAIR standards (Findable, Accessible, Interoperable, and Reusable).
This research builds on the concept of “smart cities,” a theme that originated from new technological advancements such as digitalization, the world wide web, Internet of Things (IoT), information and communication technology (ICT), artificial intelligence (AI), and the proliferation of smartphones in the late 2000s. The idea behind the smart city concept is that, in part, greater data democracy and analytics can inform more efficient and equitable practices (Liu et al., 2021). Such efforts rely on advances in both computer science and urban planning. For example, AI can be used to highlight the differences between existing and proposed floorplan images. As Optical Character Recognition (OCR) improves, so will accurate classification of text and images, thereby enabling greater machine learning. Until such time, large-scale efforts to classify plans across jurisdictions rely on large-scale research teams. For example, building a state- or national-level zoning atlas (e.g. Bronin, 2022) currently requires human eyes to read zoning maps and re-classify zoning typologies. With potential for more transparent, accessible planning data and automated processing like OCR efforts, plan evaluations can be automated (e.g. topic modeling used by Brinkley and Stahmer, 2020). With this research, we demonstrate how plans could be better formatted and federated- as well as the design of tools for plans in their current format.

Citations


Key Words: Artificial intelligence, Big Data, plan evaluation

THE SILENCES OF BIBLIOМЕTRIC NETWORKS: A THREE-FOLD APPROACH TO ILLUMINATING WHO IS AND ISN’T VALUED
Abstract ID: 1059
Individual Paper

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Planning theory is no stranger to the complex, contested nature of mathematical models that attempt to quantify aspects of human behavior. Over the past ten years, planning theory scholars have debated the merits of bibliometric analysis, most notably in the pages of the Journal of Planning Education and Research. Bibliometrics – the practice of quantifying, examining, and visually representing scholarly research output – continues to grow in prominence. Bibliometrics is built on citations and the measurement of scholarly output, which has roots in a broader cultural framework of growing technological practices aimed at quantification and measurement. Campbell (2011) reflects these concerns, noting that “performance indicators are often ‘chosen for ease of measurement and control rather than because they measure accurately what the quality of performance is’” (p. 102).

This paper will first present an uncritical bibliometric analysis of Scopus data on the topic of planning theory. One major component of this is the records selection process, which will be described in detail. Following the analysis, a critique of the uncritical analysis will be presented which considers it from three different perspectives: as a technocratic, stylized metric; as a hegemonic device that shapes and is shaped by researcher behavior; as a transformative practice that, if approached with the network silences in mind, can be selectively informative and potentially beneficial to both researcher and data subject. These perspectives map to the major positions within the planning theory debate on the nature of bibliometrics: technocratic (Sanchez, 2017), critical (Campbell, 2011), and transformative (Pojani et al., 2022; Ziewitz & Singh, 2021). Finally, this paper will present several best practices
for designing bibliometric studies that are robust, just, and inclusive. The overall aim of this paper is to illuminate those scholars who are seen and valued in a bibliometric analysis and what this valuation misses.

Bibliometrics as a method is used to explore the intellectual, conceptual, and social networks of scholars working in pre-defined domains. The tensions between the practical application of bibliometrics and the constructed nature of citations—the core element in several bibliometric analyses—require a critical, self-reflecting user of the bibliometric method to stay within the narrow corridor of right assumptions, right applications. “Citations are themselves value-laden constructs with social as well as research weight. Any aggregation of citation counts, subsequent management of the data through normalization and fractionation, and choice of analytical methodology then applied, must introduce further subjective modification that moves from original information toward a stylized indicator” (Szomszor et al., 2021, p. 17).

Planning theorists have an obligation to discuss and debate the promises and pitfalls of bibliometric analysis. Campbell (2011) articulates several of the major concerns regarding bibliometrics, which segment into the following four major points: what bibliometrics can measure, the applicability of bibliometrics to planning, how scholars adjust their behavior when being measured, and the inherent bias of bibliometric measurements especially for specific types of publications (e.g., journal articles and those capitalizing on short-term trends). The debates within planning scholarship on bibliometrics reflect several important concerns regarding the usefulness, validity, and reliability of the method. The nature of bibliometric analysis presents some noteworthy issues, including how data is visualized, who constructs the tools of visualization, who manages the networks, the nature of power in a networked world, what constitutes objectivity in a virtualized world, and how data subjects are included (or excluded) in research.

Citations


Key Words: Bibliometrics, Citation Analysis, Metadata, Planning Theory, Journal of Planning Education and Research

RACIALIZING ROADS: ARE CHICAGO POLICE TRAFFIC STOPS RACIALLY BIASED?
Abstract ID: 1135
Individual Paper

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A large number of police-citizen interactions occur through traffic stops. Research has shown that traffic stops occur at higher rates for Black and Hispanic drivers, and that traffic stops lead to searches at disproportionately higher rates for people of color. In Chicago, for example, despite making up about 30% of the city’s population, Blacks made up 63% of the traffic stops and 65% of stops that led to searches between 2015-2021. As the cases of Philando Castille, Dante Wright and Tyre Nichols demonstrate some traffic stop interactions result in fatal police violence.

In some circles, such racial disparity in policing has led to calls for more widespread use of automated camera-based traffic enforcement. Recent work by Sutton and Tilahun in Chicago, however, found enforcement through automated cameras can also disproportionately affect communities of color. They find that the automated camera system in Chicago issued significantly more tickets on a per household basis to majority Black and Hispanic census tracts than it did to majority White census tracts. The fines and fees associated with such enforcement also placed substantial economic stress on lower income communities.

Both forms of enforcement in Chicago show racial disparity relative to the city’s racial makeup (though measured differently). The sources for such disparity can include over policing in some areas, racial profiling, as well as the placement and location of cameras. Often, assessments of whether traffic enforcement disproportionately targets people of color compares the demographics of those stopped against the neighborhood in which a stop was made, adjacent locations, or city-wide demographics. However, the demographic mix of traffic on a given roadway can be quite different from the demographic mix of adjacent neighborhoods. The most appropriate data to compare stops or automated tickets against is the demographic mix of drivers on the road the stop was made. Recently, data characterizing the racial mix of roadways, derived from mobile phone traces, was made available for Chicago.

Combining data on police stops, automated camera generated tickets, and the racial mix on Chicago’s roadways, this paper examines to what extent rates of enforcement action vary by race across the two approaches to policing. We will estimate the extent to which racial profiling and bias are present in officer enforced policing of moving violations. Further, the paper examines if there are geographic differences in enforcement bias. For instance, given the segregated nature of Chicago’s neighborhoods, are Black drivers more likely to be stopped in predominantly White areas than they are to be stopped in predominantly Black areas. The paper sheds light on policing practice, the presence of bias, and the extent to which automated enforcement may help address racial inequities in policing.

Citations

- Business and Professional People for the Public Interest (2023) A new vehicle for stop and frisk: The scope, impact and inequities of traffic stops in Chicago.

Key Words: Policing, Automated enforcement, bias, racial profiling, automated cameras
RECONCILING BREADTH VERSUS DEPTH IN COMPUTATION TOOLS: BIG DATA, DATA ANECDOTES AND THE EXAMPLE OF AIR  
Abstract ID: 1167  
Individual Paper  

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Increased computational abilities have allowed urban planners and policymakers to analyze complex issues with ever-greater facility. This is especially true in the case of understanding environmental data and public health, where access to environmental data and population dynamics information and the tools to analyze them are more readily available. However, while such computational approaches offer an understanding of environmental conditions at regional and population scales, data aggregation and abstraction can result in the loss of nuance or individual variations that may be important. For instance, personal decisions such as activities, routines, and movements around the city may mitigate or exacerbate their exposure to environmental pollutants.  

This paper thus argues for a different paradigm in urban science and computational approaches to understanding urbanism: data anecdotes. Anecdotes—in depth characterizations, ethnographies, or analysis of fewer participants—are valuable because they bridge the gap between raw data and understanding. They help to contextualize data, make it relatable and accessible, and bring data to life by connecting it to real-world examples or personal experiences. However, computational tools such as sensing and behavior tracking allow researchers to understand problems with breadth, while anecdotes offer the opportunity to understand individual experiences with some degree of depth.  

To illustrate this argument, this paper discusses two pilot studies examining the lived, personal experiences with air quality and prevalent environmental justice issues in New York City. The first example measured participants in an extreme case running the 2022 NYC Marathon through the city’s five boroughs in a single day. The second followed several participants through a full day of everyday routines. Localized air quality and individual physiological data were collected using portable, wearable sensing technologies in both cases, and this paper compared this data to government and crowdsourced air quality measurements.  

By focusing on a smaller subset of the participants, this paper finds that the “thicker” data anecdotes of these participants 1) showed sometimes countering findings of air quality from official sources, 2) reveals the exacerbating effects of activity create an even more complex map of exposure risks, and 3) offers compelling anecdotal narratives to understand environmental inequity. Taken together, these data anecdotes reveal the gaps in traditional “big data” analyses yet highlight additional opportunities technological tools offer in consideration of individuals.  

Citations  


Key Words: environmental sensing, big data, urban technologies, epistemology, data narratives
STRIVING FOR A MORE CONNECTED NATION: DELIVERING REGIONAL IMPACTS WITH GRASSROOTS ACTION, DATA AND STORIES
Abstract ID: 1251
Individual Paper

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Digital skills and broadband access provide essential foundations to economic prosperity in every community. Yet too many people living in rural and emerging communities have been left behind in the race to build smart cities, 5G/6G expansion, bring connected cars to the roads, and cultivate digital innovation ecosystems. At the same time, internet usability has been a significant factor linked to non-adoption (Hargittai, 2008; Van Dijk, 2003; van Deursen and van Dijk, 2011; Mossberger et al., 2003; Mansell, 2002; Gangadharan and Byrum, 2012). The original access divide (first level) remains relevant, although it is more geographically isolated, and it has evolved for some researchers into one defined by skills and meaningful use (second level). Large swathes of rural America remain stuck at the second level of the digital divide, which is defined by the adoption of broadband skills (meaningful use).

In 2021, Congress invested $65 billion of infrastructure funding toward broadband development and digital inclusion to connect the country. In order to serve as a catalyst for further infrastructure and digital skills uptake in the rural US, a number of “Digital Fellows”, who serve as AmeriCorps members, have taken up the challenge to serve in these communities. The Fellows act as the “boots on the ground” to help ensure that communities are prepared to receive and leverage state and national investments in broadband infrastructure. This presentation will talk about their capacity building, community impacts and pathways toward greater digital economy participation within their regional host sites.

While fellows currently exist in twenty states throughout the US, this proposal focuses on the community impacts of 6 regionally based Fellows within the state of Indiana. As of August 2023, they will have served for two years within their respective communities. During this time, they have submitted monthly impact metrics, provided stories and been bolstered by a communications strategy publicizing their work. The data analysis will include a number of components not just whether the Fellows were successful in furthering digital equity, but also did their work over a two-year period improve the outcomes for their communities in any way such as increased funding? The data collected for this project has multiple impacts for all participants beyond raising local awareness for broadband issues. Passionate leaders form and communities view their own process of digital transformation and potentially the usage gaps as they exist in real time.

Beyond the provision of federal funding and the presence of boots on the ground, what is actually required to create impact within these communities to bridge the digital divide at each level? This presentation will outline the path the Fellows took over a two-year period to engage their communities, map assets, coordinate partnerships, mobilize capacity, improve literacy, embed local leaders, empower residents and increase digital literacy rates. The path to rural America’s meaningful adoption of digital skills remains uncertain and this presentation serves as a beginning interrogation of those metrics.

Citations


Key Words: digital divide, smart city, rural

APPLYING BIG DATA TO INVESTIGATE THE IMPACT OF THE DESIGN OF TEMPORARY OUTDOOR DINING PROGRAMS AND PERCEIVED QUALITIES ON STREET VITALITY -- USING TORONTO AS AN EXAMPLE

Abstract ID: 1291
Individual Paper

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During the global pandemic, North American cities have implemented tactical strategies to enliven urban street life while ensuring physical distancing for public health. This has resulted in a shift in the use of street rights-of-way from vehicular to public-oriented spaces. One critical example is Toronto’s CaféTO program, a temporary dining program born out of crisis, developed in collaboration with local Business Improvement Areas (BIA) associations and planning professionals, it transformed curb lanes into animated spaces for gathering and leisure, promoting the identity of Toronto’s main streets. After experimenting for three consecutive years since 2020, due to its overall success, the City of Toronto has approved by-laws to make the program permanent in 2023.

While previous literature has examined temporary dining programs from policy and public impact perspectives, empirical and quantitative research is needed to understand the contribution of physical interventions to street vitality during the pandemic. Additionally, the influence of the perceived environment on street vitality in the pandemic context has not been thoroughly investigated. Therefore, to answer this research question, this research utilizes big data, Computer Vision (CV), Machine Learning (ML), and comprehensive spatial analysis to examine the link between the metrics of the CaféTO program, perceived environment qualities, and bikeshare trip frequencies in Toronto.

The study utilizes hundreds of thousands of records of Toronto bikeshare volume during the pandemic as a proxy for street vitality around bike docking stations, comparing it with pre-pandemic conditions to understand changes in travel behaviors. Additionally, the multi-year design metrics of the CaféTO program, such as patio length, width, number of patios, jersey walls, and number of planter boxes, are carefully analyzed to determine their impact on urban vitality. Furthermore, subjective and objective measures of perceived environment qualities are extracted from Google Street Views (GSV) and ML algorithms, providing insights into how the perceived environment influences street vitality beyond conventional macro-scale planning variables like building density.

As an explorative study, it aims to enlighten policymakers and professionals on designing and managing street interfaces in response to the post-pandemic context to promote sustainable and vibrant neighborhoods. Overall, this research sheds light on the potential of street-level interventions to create vibrant and inclusive urban spaces that support local businesses in the post-pandemic era. With the City of Toronto’s decision to make the CaféTO program permanent, the findings of this research have timely implications for urban planning and design practices in the current and future urban contexts. The research also provides insights for other cities and policymakers considering similar tactical urbanism strategies to revitalize their streetscapes and promote sustainable and vibrant urban environments. By leveraging big data, ML, and spatial analysis, this research contributes to the growing field of urban informatics and smart cities research, highlighting the potential of data-driven approaches in informing evidence-based urban policy and design decisions.

Page 85 | 1222
## Citations


**Key Words:** temporary dining, pandemic, vitality, perceived environment, bikeshare trip frequency

## USING THERMAL REMOTE SENSING TO QUANTIFY IMPACT OF TRAFFIC ON URBAN HEAT ISLAND DURING COVID-19 LOCKDOWN

**Abstract ID:** 1325  
**Individual Paper**

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A three-month lockdown was put in place in the U.S. at the beginning of the COVID-19 outbreak in 2020. During that lockdown, the traffic volume has been greatly reduced in most of the cities, especially the bigger metropolitan areas such as the San Francisco Bay area. This research explores the impact of transportation on climate change by using remote sensing technology and statistical analysis during the COVID-19 lockdown. We use thermal satellite data that measures the intensity of the urban heat island, the main driver for climate change during the urbanization process. We acquired morning and afternoon MODIS data in the same periods in 2019 before the pandemic and 2020 during the pandemic. MODIS imagery provides a wall-to-wall land surface temperature map to precisely measure the dynamics of the urban heat effect. Also in situ meteorological data were acquired to build an urban surface energy budget and construct statistical models between solar radiation and the intensity of heat dynamics. We implement this urban heat budget in North and South California. This research quantifies the impact of lockdown policies on heat intensity in urban areas and human mobility in the context of COVID-19 and future pandemics. The quantitative results obtained in this study provide critical information for analyses of climate change impact on an urban scale.

**Citations**


**Key Words:** urban heat island, urban transportation, thermal remote sensing
This paper aims to construct a distinctive lens of how we should see urban technology in the context of a long history of systemic racism, and how we can take a reparative approach to intervene in contemporary situations of racial inequality. The current discourse of urban science often puts an emphasis on newly available (and big) data, idolizes methodologies of “hard” sciences such as physics, computer science, and mathematics, and evolves to incorporate the latest technologies and analytic methods including machine learning, and artificial intelligence (Kang et al. 2019). However, the role of urban science and analytics that “move[s] beyond analysis” (Batty 2019, 405) has not been extensively theorized. In particular, the relationship between urban technologies, white supremacy, and racial capitalism has not been extensively studied. Nonetheless, the impact of the applications of such “urban analysis” on people’s urban lives has been substantial. For example, financial technologies (FinTech) and their application to real estate (proptech) have emerged as tools for collecting data on our daily urban lives and making crucial decisions regarding renting and homeownership (McElroy 2020). From that perspective, it is imperative to examine how and why urban technologies perpetuate racial inequality and imagine how urban science “ought to function in a society of sciences,” (Kang et al. 2019, 1759) and mainly, contribute to advancing racial justice.

Building on Williams’ (2020) call for reparative planning and emerging discourses of “algorithmic reparation” (Davis, Williams, and Yang 2021), this paper proposes a normative framework of reparative urban science that challenges whiteness in urban science and embraces the epistemologies and methodologies of reparations. First, this paper presents three mechanisms — formalizing, legitimizing, and penalizing — of how urban technologies perpetuate historical inequalities in a race-neutral guise, penalizing historically marginalized groups and legitimizing these decisions under the pretext of accuracy and fairness. It argues that given the pervasive nature of systemic racism, particularly its race-neutral ideologies that deny the history of white domination and oppression of people of color in the US, the epistemologies of urban science and the role of digital technologies should be understood with white supremacy and racial capitalism. Then, the paper discusses epistemologies of reparative urban science—challenging race-neutral ideology and envisioning the role of technology in reparations, as well as methodologies that have reparative potential, including algorithmic auditing, crowd-sourced data collection from communities, and the utilization of algorithms to present a potential future that can be reparative —creating a vision that enables us to gather, discuss and deliberate as a community, and evaluate whether this future aligns with our aspirations. Ultimately, this paper aims to establish reparative potentials in urban science for racial justice by incorporating historical harms into our understanding of contemporary technologies, and, broadly, it hopes to contribute to creating a new world that can heal from the wounds of past racial empires and the current racialized social system.

Citations

Tranquility is a personal condition that has been shown to have numerous positive effects on mental health. Various methods for preserving potentially tranquil places have been proposed, these typically involve setting aside places with low noise levels, located in remote areas (see UN backed ‘quiet areas’). In order to gain the positive aspects of tranquility in accessible urban areas, we need to identify the characteristics of tranquil spaces despite an anthropogenic presence.

This study aimed to investigate the role of visual context in determining perceived tranquility. We used a nationwide dataset of Flickr photos. Text mining identifies perceptions of tranquility and the accompanying photographs are quantified using computer vision technology and semantic segmentation for the physical features of tranquil views during different periods. Visual descriptors obtained from the segmentation model were used to identify typical features of tranquil scenes, and their contributions to the consumption of tranquility.

The study found that overall vegetation did not necessarily increase perceived tranquility. Trees were positively correlated with tranquility during daytime and dusk but had a negative impact at night. Grass, flowers, and other dense vegetation reduced the sense of tranquility. Natural water bodies were found to be the most stable element contributing to a tranquil scene, as they were beneficial at any time of the day. Dynamic objects such as people and vehicles were negatively associated with tranquility, but this effect was not significant during dawn, dusk, or night.

This study utilized big data to explore the role of physical settings in determining perceived tranquility. The results demonstrate the potential of social media photos in understanding the qualities of built environments as perceived by the public. By incorporating computer vision techniques into the design process, this study provides suggestions for future design practices aimed at promoting tranquil experiences in urban environments.

Citations


Key Words: Tranquility, landscape perception, semantic segmentation, social media

PREDICTION OF CHANGES IN URBAN SPATIAL STRUCTURE THROUGH HUMAN ACTIVITY PATTERNS: A STUDY USING URBAN SERVICE POPULATION DATA
Abstract ID: 448
Research in Motion (RiM)

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As cities become more diverse in human activities, it becomes increasingly difficult to understand the role and function of urban space. This study aims to quantitatively measure the structure of urban space by analyzing the movement pattern of the population beyond the resident population, to understand the role of cities. This research will analyze where, for what purpose, and when people are concentrated in their daily lives.

Spatial structure has a significant impact on people's daily lives, economic growth, social equity, and sustainable urban development. Therefore, identifying the functions of each city organization is critical for planning and strategy.

Current methods of analyzing urban spatial structure are divided into morphological and functional dimensions. The former analyzes the size and spatial distribution of urban centers, and the latter analyzes the connection between centers.

The most important factors in analyzing the spatial structure of a city are the number and hierarchy of centers. However, it has become difficult to understand the center by a single attribute, as people's movement patterns have become more diverse due to increased commuting between regions, telecommuting, and leisure activities such as shopping.

To overcome these limitations, this study will use "service big data based on credit card and mobile use" to estimate the urban service population as an analysis variable. These data have been in the spotlight in recent studies as they represent people's actual activities in urban spaces.

The target of analysis is Seoul, South Korea, where various human activities are taking place. As the first step, this study will analyze the distribution diversity and density of the urban service population as of 2022 to derive centers and identify the functions of each center. Additionally, the centrality index, an index that combines density and diversity, will also be derived. As a second step, this study will predict future changes by training urban service population data over the past few years using deep learning analysis methods based on artificial neural networks such as CNN-LSTM, GANs, and Autoencoders. The methodology with the highest suitability among these will be chosen. Third, this study will look at changes in the location, size, and function of centers in 2022 and specific years in the future, as well as the characteristics of changes in the centrality index of existing centers. Based on this, the
direction of future urban plans and strategies will be established.

Quantitative measurement of the spatial structure conducted in this study will greatly contribute to better understanding and managing the rapid urban change process.

Citations


Key Words: Urban spatial structure, Service population, Central place theory, Deep learning, Urban centrality index

AI-BASED MOBILE CROWDSENSING TO ENHANCE COMMUNITY DISASTER RESILIENCE

Abstract ID: 449
Research in Motion (RiM)

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The failure of centralized emergency response to local community needs has resulted from the increasing scale and unpredictability of disasters. Volunteer local help networks have played an important role in enhancing community disaster resilience in the early stages of a disaster. Mobile crowdsensing, which allows large groups of people to share information using mobile devices, has enormous potential for effective sensing and awareness raising. Because people can share real-time information in a disaster via online social network systems (e.g., Facebook, Twitter, Instagram, etc.), the spatial extent and efficiency of local help networks are greatly increased (Purohit, Castillo, Diaz, Sheth, & Meier, 2013). This emerging pattern demonstrates how self-organized volunteers in the virtual world can improve emergency operations in a disaster.

Despite the potential of large-scale voluntary cooperation, the actual use of mobile crowdsensing in a disaster has not been widespread in many cases due to difficulties in initiating and maintaining people’s participation (Hsu, Malik, Johnson, & Esty, 2014). At the heart of the issue is a public goods dilemma in which people must invest time and money to contribute to the sensing task, but the benefit of the resulting public good (collected data) is often available to all people regardless of their contribution levels. People will freeride and be reluctant to participate in mobile crowd sensing unless appropriate incentives are in place.

As the number of social media users grows, it is expected that the trend of crowd sensing in a disaster that relies on social media will flourish even more in the future. However, little research has been done on the impact of increasing the group size of an online social network on human collective behavior. In real society, for example, an increase in group size increases the incentives for free riding (Diekmann, 1985), but this has not been adequately verified in online community settings (Mao, Mason, Suri, & Watts, 2016). Furthermore, there has been debate over whether or not the existing social network structure (somewhat reciprocal or conditional cooperative) influences pro-social behaviors in online communities (purely altruistic or unconditional cooperative). As a result, it is critical to investigate how the size and structure of a social media-based network affects the level of voluntary cooperation during a disaster.
More effective strategies for increasing user participation in crowdsensing can be identified by investigating how such conditions interact to shape outcomes and which configurations are more important than others (El Barachi et al., 2020). The goal of this research is to determine and test which combinations of several artificial intelligence (AI)-based solutions can result in higher levels of user participation in mobile crowdsensing. We test a crowdsensing mock-up design in which users produce geo-referenced reports about the real-time disaster, receive information feedback from servers (visualization of aggregated data), and communicate with other users to achieve the goal. It will be designed to capture key aspects of the public goods dilemma, such as the fact that users must incur personal costs (battery power and data transmission costs, as well as the effort to perform the sensing task, etc.) in order to contribute data. This testbed experiment will allow us to gain a broad understanding of the human behavioral factors that contribute to successful crowdsensing in a disaster. This study is expected to ease the burden on individuals to contribute disaster information to crowdsensing with AI-based solutions in order to increase community disaster resilience.

Citations


Key Words: Community disaster resilience, Mobile crowdsensing, Artificial intelligence (AI), Social media

ENCODING URBAN TRAJECTORY AS A SENTENCE: DEEP LEARNING INSIGHTS FOR HUMAN MOBILITY PATTERN
Abstract ID: 458
Research in Motion (RiM)

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Rapid advancements in deep learning technology have shown great promise in helping us better understand the spatio-temporal characteristics of human mobility in urban areas [1, 2]. There exist two main approaches to spatial deep learning models for urban space - a convolutional neural network (CNN) which originated from visual data like satellite image [3], and a graph convolutional network (GCN) which is based on the urban topologies such as road network and regional boundaries [4]. However, compared to language-based models that have recently achieved notable success, deep learning models for urban space still need further development. In this study, we propose a novel approach that addresses the trajectories of a trip as sentences of a language and adapts techniques like word embedding from natural language processing [5] to gain insights into human mobility patterns in urban areas.

Our approach involves processing sequences of spatial units that are generated by a human agent’s trajectory, treating them as akin to word sequences in a language. Specifically, we represent individual trajectories as sequences of spatial vector units using 50x50 meters grid cells to divide the urban area. This representation
captures the spatio-temporal changes of the trip, and enables us to employ natural language processing techniques, such as word embeddings and attention mechanisms, to analyze the urban trajectory sequences. Additionally, we leverage word embedding models from language processing to acquire compressed representations of the trajectory. These compressed representations contain richer information about the features, while minimizing the computational load.

To evaluate the effectiveness of our approach, we are designing an experiment to validate that our urban area embedding can be used to infer a mobile phone-assessed travel pattern. We represent trajectories based on the travel log and apply our language-like deep learning model to analyze and predict the spatio-temporal human mobility pattern in urban areas. It will be compared with the results of existing baseline models for human mobility prediction.

Our approach offers several contributions to urban planning. By leveraging the techniques of natural language processing, it can easily input the spatial information of trajectories into a deep learning model. The development of a deep learning model for urban planning can provide new insights into the underlying mechanisms and relationships between the built environment, socio-economic demographics, and travel behaviors. Combining with the existing urban big data, the deep learning model can assist to inform decisions regarding the prediction of human mobility, the design of public spaces and streets, and evidence-based urban planning.

In summary, our novel approach of encoding urban trajectories as sentences in a language, and adapting natural language processing techniques, offers a new perspective on understanding and predicting spatio-temporal patterns of human mobility in urban areas. We anticipate that our results will demonstrate the advantages of this language-based approach and provide new insights into the underlying mechanisms and relationships between various factors that influence human mobility patterns.

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Citations


Key Words: human mobility, urban trajectory, spatial sequence, deep learning model, natural language processing

DID VULNERABLE COMMUNITIES EXPERIENCE MORE NONCOMPLIANCE AND DELAYS IN EVACUATIONS?
EVIDENCE FROM THE 2021 MARSHALL FIRE, CO

Abstract ID: 600
Research in Motion (RIM)

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In recent years, the extent of wildfires and the resulting damage have been increasing in the United States, primarily due to the impacts of climate change [1, 2]. The trend poses growing threats to the safety of individuals residing in wildfire-prone areas, particularly for vulnerable individuals who often face additional challenges in evacuating [3]. Hence, it is pressing to develop effective wildfire evacuation planning strategies that prioritize the unique needs of vulnerable populations and ensure environmental justice. To support the equitable planning of wildfire evacuations, we need to gain a deeper understanding of evacuation behavior and the evacuation timelines of these vulnerable populations.

Inspired by the work of [4] that analyzed the impacts of income inequality on hurricane evacuation and mobility patterns using mobile phone location data, this study proposes a novel methodology for analyzing wildfire evacuation patterns with mobile device GPS data, and investigates the behavioral and spatiotemporal discrepancies among vulnerable communities, which are at a higher risk of harm during an evacuation due to their socioeconomic disadvantages. The methodology initially estimates the home locations of residents by utilizing a proxy-home-inference algorithm [5]. It then employs an innovative and generalized evacuation behavior inference algorithm that is applicable to a wide range of fire scenarios, considering the specific characteristics of each fire, to categorize residents into multiple evacuation types, such as evacuees under order/warning, self-evacuees, intra-zone evacuees, and non-evacuees. Additionally, the departure time and destinations of each individual are captured using an evacuation response and destination inference algorithm. After inferring the who, when, and where to evacuate during a wildfire, we will (1) allocate residents to different census tracts according to their approximate home locations, (2) make comparisons on evacuation types, departure times, and destination types between advantaged and disadvantaged tracts (in this study, we mainly consider income, car ownership, race, age, and household size), and (3) examine whether significant differences in evacuation patterns of advantaged and disadvantaged communities exist. The overall methodology and spatiotemporal analyses are evaluated by using the 2021 Marshall Fire in Boulder County, Colorado. The final evacuation patterns of different communities in Boulder County, Colorado, uncover several insights. For instance, a higher proportion of non-evacuees and intra-zone evacuees, along with a significant delay in departure, was observed among vulnerable communities, indicating reluctance or inability of residents in these communities to evacuate to farther and safer areas.

To conclude, the study contributes to promoting equitable wildfire evacuation planning in multiple aspects. Firstly, the methodology relies on granular spatiotemporal data to categorize human movements, offering new perspectives on how individuals in different communities, especially the vulnerable ones, respond to wildfires and thus shedding light on developing better-targeted policies and educational campaigns to improve future wildfire evacuations. Secondly, the methodology can be easily adapted to a wide range of fire scenarios, providing a powerful tool in assisting the development of wildfire evacuation plans. Ultimately, the study offers the potential to integrate big data and small survey data to gain a better understanding of evacuation patterns. Specifically, GPS data analysis can help pinpoint where and when high noncompliance and delays are more likely to occur during evacuation. Subsequently, surveys can be distributed to these vulnerable communities to better comprehend the factors contributing to noncompliance and delays, in order to develop more effective evacuation plans.

Citations


Key Words: Wildfire evacuation planning, Vulnerable communities, GPS Data, Evacuation Pattern, Data Analysis

EXPLORING COMPLEX AND DIVERSE ACTIVITY PATTERNS OF SUBWAY RIDERS IN THE NEW ERA: A CASE STUDY IN WUHAN USING SMART CARD DATA
Abstract ID: 719
Research in Motion (RiM)

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Advances in communication and transportation technology have enabled people to engage in more complex and diverse daily activity patterns, such as flexible work schedules and online consumption. The COVID-19 pandemic has further accelerated these trends, posing new challenges and opportunities for urban space and transportation planning. This paper uses smart card data to examine the daytime and nighttime travel and activity patterns of subway riders in Wuhan, China. It first identifies frequent subway riders based on their card-swiping records over a year, and constructs vectors of their trips to activity destinations, daytime activities, and nighttime activities. It then applies statistical analysis, spatial analysis, and K-means clustering method to analyze the data and reveals that: (1) daytime activities are concentrated around work station areas, with most people having at least three activity stations; (2) morning peak hours exist between 7 a.m. and 9 a.m., while nighttime activities before sleeping are more dispersed in time - from 5 p.m. to 11 p.m., with most non-work trips occurring in this period; (3) many passengers have multiple resting places at night, with two or more overnight locations becoming increasingly common; (4) there is an overall positive correlation between travel time to destination and dwelling time at destination; (5) suburban residents have earlier departure time in the morning than downtown residents. These findings suggest that researchers should not assume that people follow fixed activity patterns, like commuting at a regular time every day, or living and working in one place. By taking into account these changes and characteristics of people’s activity patterns in the new era, researchers and policymakers can enhance their understanding of travel and activity demands of residents, which can be used to inform planning and policies.

Citations

Key Words: Activity patterns, Travel behavior, Smart card data

INTEGRATING GOOGLE MAPS REVIEWS AS A DIGITAL PARTICIPATORY PLANNING TOOL INTO DYNAMIC DECISION-MAKING PROCESSES
Abstract ID: 822
As one of the first stages of urban planning studies, the key point in social structure analysis is to understand the expectations, problems, needs, and requirements of the citizens regarding the planning area. Traditional methods such as surveys and interviews are labor-intensive, time-consuming, and questionable in terms of efficiency, inclusiveness, and validity. On the other hand, the fact that digital data can be easily accessed and analyzed with various tools and applications today leads researchers including urban planners to conduct fast and efficient analyses. Within the scope of this study, how Google Reviews can be analyzed as one the digital data and how it can be integrated into the urban planning discipline is discussed.

Google Maps Reviews provide a quick comprehension of citizens’ perspectives on a place, even in different languages. This study examines the potential of Google Maps Reviews as a tool for gaining insight into citizens’ perceptions of urban spaces in Istanbul’s and Turkey’s most populous neighborhood, Esenyurt. The aim is to explore the perspectives of those who may lack formal representation or are unable to participate in traditional participatory planning processes.

In the case of site selection, it is aimed to select the parks used by the local people in general, rather than the public areas located in the tourist and central areas of the city. On the other hand, Esenyurt stands out in terms of population and lack of green space within the other districts in Istanbul. However, most of the Google Maps Reviews studies are conducted in English. Therefore, the selection of a non-English review data set paves the way for the method to be applied to other public spaces in the world.

This study looks at how innovative methods can be combined with traditional methods for more comprehensive research. Prior to the digital data analysis, a pilot field survey, and interviews were conducted within the scope of the study. During the Google Maps Reviews analysis, the relationship between reviews and ratings was examined, the effect of the keywords that emerged in each public space specific on the ratings was measured, and which features of the public spaces led to low or high ratings was analyzed. Therefore, common and different highlights between field research and reviews were revealed and similar or differentiating issues were found between the results of both methods such as the basic activities, the major concerns, and the usage limitations of each place. For this reason, these two methods should be used together to complement each other.

On the other hand, cities are living organisms that are hard to manage and analyze with linear and one-way systems. Another purpose of this study is to propose an architectural framework for integrating Google Maps Reviews into dynamic decision-making processes. An architectural system has certain levels and processes and in the case of dynamic decision-making systems, they should be versatile and controllable, supportable, changeable, and reversible at every stage of the process. This and similar architectures should be combined, interactable, and collaborative with other architectures. Thus, uninterrupted and non-repetitive output production can be realized with more innovative methods. In addition, with a dynamic system, citizens come to a position not only as data providers but also to be included in participatory negotiation processes throughout their urban experiences.

In conclusion, we describe how city planners can integrate this digital tool to facilitate data-driven public participation in ongoing participatory processes. Integrating and utilizing it can provide a more comprehensive understanding of citizens’ perspectives in a more inclusive and collaborative way and enable informed decisions based on real-time feedback.

Citations

THE GLOBAL "URBANS" OF PLATFORM URBANISM

Abstract ID: 1029
Research in Motion (RiM)

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While there has been much discussion and research done on platform urbanism and its impacts on planning, most work has focused on cities in the Global North, with less attention paid to what is happening in the Global South, despite these cities’ deep involvement in the process that is platform urbanism, along with their post- and neo-colonial relationships to platform providers today. What role do cities in the Global South play in platform urbanism, both in their local context and the platform urbanism of elsewhere?

This paper presents a case study of platform urbanism in the Global South, investigating the shifting competitive landscape of on-demand food delivery apps (ODFD) in Manila, both as consumer-facing businesses and back-office operations centers. This paper pays particular attention to the company FoodPanda, and the relationship between its day-to-day operations in cities throughout the Philippines and its corporate and financial links to Singapore, Germany, and the United States. It looks at the different ways in which platform urbanism is present in a city and at the institutions or stakeholders who control this presence. A mixed methods approach of archival research and web scraping of the FoodPanda Philippines website to argue that the continuities and resonances of platform urbanism are being produced on a “trans-urban” scale.

Municipal planners and policymakers have frequently been forced to respond to platform companies as local and decentralized entities. By contributing to a larger conversation on the planetary effects of urban platform companies, this paper demonstrates how, in order to successfully create policy responses to platform companies, planners and policymakers must work with a “trans-urban” mindset extending beyond the borders of their local space.

Citations


Key Words: platform urbanism, food delivery, trans-urbanism, web scraping

**USING AGENT-BASED MODELLING (ABM) TO SIMULATE HEALTHIER URBAN DEVELOPMENT AND HEALTHIER TRAVEL BEHAVIOUR**

Abstract ID: 1069
Research in Motion (RiM)

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There exist studies on physical inactivity as a main risk factor for health issues, the impact of the built environment on physical activity, the relationship between the built environment and travel behaviour, and how urban development decision-making (e.g., policymaking, investment and development) affects the shaping of the built environment. However, few have looked at these altogether holistically. In response, this study addresses the research question: “Can agent-based modelling (ABM) be used as a tool to bring together various fields such as planning, real estate, transport and public health for integrated policy-making for behavioural change?”

ABM is a modelling technique that can simulate individual agents’ behaviours, their interactions, and the impact on complex systems (i.e., systems composed of many components that interact with each other) based on behavioural rules (Silva et al., 2014). Using complex systems theory and ABM, this research examines urban development and travel behaviour with a focus on health and health inequality. A case study is performed on Greater Manchester (GM)’s 'Streets for All' initiative which includes the 20-minute neighbourhood concept of each citizens reaching essential functions within 20 minutes of walking and cycling. This ABM conceptualises the feedback loops where 1) citizens’ switch to non-car modes increases physical activity leading to better health and further encouraging active mobility, and 2) more consumer/user demand for carless urban environment leads to pro-health urban development in land/building use change that facilitates further mode switch away from car, creating a virtuous cycle.

This study uses NetLogo as a modelling platform and uses various spatial data in 100*100m grid cells. The behavioural rules for land/building use change scenarios will be set based on policy/industry reports as well as first-hand interviews/surveys of around twenty planning and real estate actors in Greater Manchester. These are closely related to trends such as the increased work-from-home affecting retail and office buildings to turn into residential in the city centre and encouraging local living and a 20-minute neighbourhood lifestyle, which would impact different groups differently as lower-income population tends to have jobs that require commuting. System-level pro-health patterns of urban development will be measured in metrics such as density, proximity and diversity adapting the 15-minute city framework. The rules for individual residents’ switch of the main mode from car to non-car will be set using the UK Census individual microdata based on behavioural theories such as the theories of planned behaviour and interpersonal behaviour (Kwon and Silva, 2023). UK National Health Service (NHS) disease prevalence data will be used to link the key related diseases such as obesity, diabetes, hypertension and depression/anxiety to physical activity in the model in collaboration with the health experts (Riiser et al., 2018).

The simulations are to run from 2021 until 2040 to test the likelihood of Greater Manchester achieving its vision for 50% mode share of walking/cycling/public transport by 2040. The travel mode switch and urban development decisions are to be made yearly within the model. The simulation results will enable various spatial analyses, for example, of borough/neighbourhood-level health and health inequalities related to the socio-economic divide in the individual’s ability to work-from-home and/or to achieve the 20-minute neighbourhood lifestyle. The simulation will also enable various top-down/bottom-up policy implications for behavioural change for residents’ pro-health travel decisions as well as real estate/planning actors’ pro-health urban development decisions.
Key relevance of this research to planning scholarship and practice include contribution to the development of: 1) human-environment dynamic modelling by adding the human decision-making component on top of a GIS-based spatiotemporal model (Liu et al., 2021), and 2) ABM as a planning support science for integrated policy-making (Silva et al., 2020).

Citations


Key Words: Agent-based modelling, Complexity theory, Health and health inequality, Urban development, Travel behaviour

EXPLORING THE VALUE OF EXPERIENCE ECONOMY ON COMMERCIAL STREETS: EMPIRICAL EVIDENCE FROM ONLINE REVIEWS

Abstract ID: 1238
Research in Motion (RiM)

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Providing memorable and unique experiences is a key strategy for revitalizing commercial streets in decline. This experience economy has received attention as the trend in consumption has shifted towards a preference for experiential offerings rather than just buying products (Pine & Gilmore, 2011). For a small business, understanding and enhancing these experiences is critical to success (Grewal et al., 2009). Recently, many empirical studies have confirmed the positive effects of unique experiences in a restaurant and café on visitors’ satisfaction (Mehraliyev., 2020; Zhou., 2023).

While the importance of experience economy is linked to the growth of commercial streets, our understanding remains at the level of business. When aggregated restaurants and cafes provide a good experience, the streets offer diverse and unique atmospheres tend to attract more visitors, leading to increased foot traffic and sales for businesses. By investing in the experience economy, commercial streets can create a competitive advantage and drive economic growth in their communities. However, it is still a lack of research on the value of economic experience beyond the business level.

We hypothesized that the commercial streets providing a higher degree of experience economy have higher foot traffic and sales. To measure the experience economy, we used online reviews text collecting Google Maps Reviews on Seoul. Adopting text-mining approaches, we developed a sensory and sentiment dictionary to
determine whether the review text contains positive or negative experiences. Then, we aggregated the magnitude score of experience into a census-track level as an index. The foot traffic and sales data were joined by obtaining Seoul Big Data Campus. By controlling the POI characteristic (chain/non-chain, business type, location) to accurately measure the effect of experience, we analyzed the influence of the experience economy index on the foot traffic and sales revenue of commercial streets.

Based on the empirical evidence from online reviews, it is clear that the experience economy has a positive impact on commercial streets. Customers value businesses that provide unique and memorable experiences and are willing to pay a premium for these experiences. This, in turn, leads to increased foot traffic and sales for businesses in commercial streets. This implies that governments can play a role in supporting the development of the experience economy by providing incentives for businesses to invest in experiences, promoting the benefits of the experience economy to consumers, and creating policies that encourage the growth of businesses in commercial streets.

Citations


Key Words: Experience Economy, Sensory Experience, Commercial Vitalization, Online Review, Sentiment Analysis

EXPLORING THE GEOGRAPHY OF SOCIAL TIES IN THE U.S. BASED ON THANKSGIVING DESTINATIONS

Abstract ID: 1292
Research in Motion (RIM)

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With evidence from the recent outbreak of Covid-19 and increasing occurrences of extreme weather events, a growing body of work suggests that human migration will become more frequent than we estimate (Hauer, 2017). Empirical evidence suggests that individuals tend to relocate to areas where they possess social connections, particularly family members, as networks provide social support and access to information (Chi, 2020). Therefore, understanding the regions with significant social ties can have practical implications for emergency preparedness and climate adaptation (Black et al., 2011).

In this background, we aim to visually identify the geography of the familial and social ties in the United States. To accomplish this, we have conducted an in-depth analysis of travel patterns during four years of Thanksgiving holidays, a time when the majority of individuals visit their families. The study assumes that trips made around Thanksgiving Day are predominantly made to visit people with kin relationships (e.g., family, close friends). This study employs SafeGraph data, which includes the weekly foot traffic of individuals with their anonymized smartphone data. The data also provides 1) visitors’ residential location at the Census Block Group level and 2) information on destination POIs, including locations. Based on the O-D patterns in the four years of Thanksgiving weeks that we collected (2018-2021), we used repetitive visits as a proxy of kin networks among family or close friends. Then, we visualized and examined the geographic distribution of social/family ties in the U.S.
The results of this study can have several implications for urban planning. By mapping out the spatial patterns of familial and social ties, urban planners can identify regions that are more likely to experience migration during catastrophic events. This information can be leveraged to develop more efficient and effective emergency evacuation plans, ensuring the safety and security of the affected individuals. Additionally, the study highlights the importance of understanding migration patterns and social connections when developing urban planning policies. Cities and regions can use the data from this study to identify areas with high concentrations of familial and social ties and develop policies to support these networks.

Citations


Key Words: social ties, family ties, human mobility, human geography, social network

A TIME-USE PERSPECTIVE OF ELDERLY DAILY ACTIVITY SPACES IN SHANGHAI: USING THE SMARTPHONE-BASED GLOBAL POSITIONING SYSTEM TRAJECTORY

Abstract ID: 1293
Research in Motion (RIM)

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Encouraging healthy and active aging is now recognized as a central goal of urban planning and policy efforts worldwide. As the global population ages, understanding the elderly people's activity-travel patterns is crucial for developing an age-friendly society. This study aims to provide new insights from a time-use perspective. We used the smartphone-based global positioning system (GPS) trajectory to explore the activity spaces of 76 older adults in a high-density urban community above in Shanghai over 102 consecutive days.

The GPS trajectories were analyzed to reveal the spatial and temporal patterns of elderly daily activities, including home-based activities, neighborhood activities, and out-of-neighborhood activities.

The results reveal that older adults in Shanghai spend a significant amount of time at home, with an average of 19.8 hours per day. Neighborhood activities, such as leisure walks, participating in social activities are also common, accounting for an average of 3.1 hours per day. Out-of-neighborhood activities, such as grocery shopping visiting green spaces or public services, are less frequent, with an average of 1.9 hours per day. The study also found that older adults tend to have distinct activity patterns on weekdays and weekends, with more time spent at home and in the neighborhood during weekdays, and more time spent on out-of-neighborhood activities during weekends.

Furthermore, the research the spatial characteristics of elderly daily activity spaces. The results reveal that the majority of elderly daily activities are concentrated within a 1.5 kilometer radius of their homes, indicating a limited travel range among older adults. The study also detected that older adults tend to frequent a small number of locations on a regular basis, suggesting a strong sense of attachment to these places and a predictable routine in
their daily activities.

The findings of this study have important implications for urban planning and policymaking in Shanghai and other high-density aging cities. The results underscore the importance of home-based and neighborhood activities for older adults, highlighting the need to create age-friendly neighborhoods that offer opportunities for social engagement and physical activities within close proximity to residential areas. The findings also emphasize the importance of considering the temporal and spatial characteristics of elderly daily activity spaces when designing urban environments and transportation systems to facilitate the mobility and well-being of older adults.

In conclusion, this study offers a time-use perspective on the daily activity spaces of elderly individuals in Shanghai, utilizing GPS trajectory data to shed light on their activity patterns and spaces within the context of an aging city. The findings contribute to the existing literature on aging and urban planning, providing valuable insights for policymakers and planners to create more age-friendly cities that support active and healthy aging for older adults. Further research could delve into the relationship between daily activity patterns and health outcomes, as well as explore the preferences and needs of older adults in terms of activity spaces and transportation modes, in order to inform better urban planning and policymaking. Overall, understanding the daily activity spaces of older adults is crucial for promoting active aging and enhancing the quality of life for the aging population in urban areas.

Citations


Key Words: Time use, daily activity space, spatio-temporal behavior, older people, Shanghai

Track 1 Posters

PLANNING OTHERWISE IN THE VIRTUAL REALITY ERA: CO-PRODUCING A VIRTUAL COMMUNITY WITH ZOOM EMPLOYEES IN THE SAN FRANCISCO BAY AREA

Abstract ID: 313
Poster

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Since the outbreak of the Covid-19 pandemic, remote work has instantly gained popularity across the San Francisco Bay Area, with businesses adopting it ranging from high-tech companies to traditional service industries. Census data from 2019 to 2022 shows that approximately 46% of San Francisco Bay residents worked remotely, making it the region with the highest work-from-home rate within the state.

While initially intended as a temporary solution, remote work has emerged as an irreversible trend due to its convenience and flexibility. Although many studies have highlighted the positive impacts of remote working, concerns have been raised regarding the lack of social support and the blurred work-life balance associated with the new work mode. The classic planning theories suggest that these concerns may be addressed via community engagement process (den Broeder et al., 2021; Fedorowicz et al., 2020), which allows reciprocal feedback between planners and community members, ensuring that planning-decisions truly reflect the local demands (Booher, 2008). However, this is not always the case, as the approach is contingent upon resource availability, location, time, and accessibility. For example, traditional methods of community engagement, such as public meetings and workshops, may not be accessible to all members of the community, especially those with family responsibilities or physical disabilities. This lack of accessibility can result in a lack of diversity and representation in the placemaking process and lead to the exclusion of marginalized populations.

Under this backdrop, we propose that virtual communities can serve as a valuable tool to enhance community engagement in response to the significant changes of work mode caused by the pandemic. Virtual communities offer an accessible and inclusive platform that brings people together from any place to share interests, ideas, and experiences in a virtual environment. This can help overcome the challenges in traditional community engagement and foster collaboration among diverse groups from different parts of the world. Moreover, virtual communities facilitate the “citizen participation” process, as it offers a simulated environment that enables users to articulate, design, and build communities serving their needs without any physical space constraints. This is more efficient and flexible as compared with the traditional public engagement methods, which often tries to convince community numbers of experts’ works rather than empowers them to propose their own public interests (Daviddoff, 2007).

We propose a collaborative approach to community engagement in this study, enabling remote workers in the San Francisco Bay Area to co-create planning scenarios with planners and decision-makers in a virtual world (Innes, 2005). We assess the feasibility of virtual communities as an alternative to traditional community engagement by adopting a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, comparing the characteristics of our proposed virtual framework with the traditional models. Furthermore, we use graphical design methods to simulate the possible scenarios incorporated in the virtual platform, including the negotiation of community members and planners, data and feedback collection, as well as the urban design process as a collaborated efforts of locals and experts. By co-creating planning scenarios, decision-makers can incorporate the community’s perspective in their plans by gathering data and information. It allows planners to raise awareness of the actual needs of remote workers in the San Francisco Bay Area. Such solutions can encourage community engagement among remote workers and promote social interaction, ultimately enhancing community well-being and productivity.

Citations


- Healey, Patsy, David E. Booher, Jacob Torfing, Eva Sørensen, Mee Kam Ng, Pedro Peterson, and Louis Albrechts. "Civic engagement, spatial planning and democracy as a way of life civic engagement and the quality of urban places enhancing effective and democratic governance through empowered participation: Some critical reflections one humble journey towards planning for a more sustainable Hong Kong: A need to institutionalise civic engagement civic engagement and urban reform in Brazil setting the scene." Planning Theory & Practice 9, no. 3 (2008): 379-414.

Key Words: Community Engagement, Virtual Community, Remote Working, Planning theory

IDENTIFICATION OF URBAN CENTERS BASED ON DEEP LEARNING CONSIDERING FUNCTIONAL LINKAGES AND CENTRALITY INDICATORS

Abstract ID: 701
Poster

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A urban center is a spatial unit that provides goods and services in conjunction with the hinterland areas. Establishing an urban center within the urban spatial structure has a profound effect on the future physical, economic, and environmental development of cities. In previous research, the urban core was identified in a variety of methods, such as using centrality indicators, functional approaches, and spatial statics, among others. Also, the indicators utilized are diverse, including employees, structures, and population. These methods vary based on the researchers' definition of the urban center, indicating a lack of consistency. Consequently, a method capable of encompassing all of these methods is required. To address this, both the functional linkage within the city and the centrality indicators of the city itself should be considered, as well as a method that incorporates all researcher-specific indicators. However, the previous approaches to achieving this objective have limitations. Recent research has attempted to analyze the real world with various structures, such as social, economic, and transportation networks, by converting them into graph data consisting of nodes and edges, and proposing a method for analyzing the complex interactions using Graph Neural Network (GNN) algorithms. Using neural network weights, the algorithm described above can simultaneously represent the characteristics of objects and their spatial relationships. This can be used to create nodes and edges that reflect the centrality and interconnectivity between urban center and hinterland areas within the city's spatial structure, and to identify the urban center using the constructed graph data. In this study, a Graph Convolution Network (GCN) method is proposed that constructs urban centers and hinterland areas as nodes and edges, respectively, in order to identify urban centers by taking into account both node features and edge features. In this method, the node characteristic is the centrality index, and the edge characteristic is the functional interconnection, which can incorporate all central districts as defined by researchers. Next, GNExplainer is used to extract feature importance from the GCN model, to investigate the primary functions of central districts and compare them to actual urban planning in order to present methods for identifying urban centers and promoting their development.

Citations


Key Words: Urban centers identification, Functional approach, Centrality, Deep learning, Graph neural network

DATA FOR TRAVEL BEHAVIOUR RESEARCH: RECENT ADVANCES, CHALLENGES AND OPPORTUNITIES IN THE ERA OF SMART CITIES
Abstract ID: 705
Poster

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A highly interdisciplinary field, travel behavior research depends heavily on empirical data to represent human mobility. Guided by theories of time geography, transport geography and behavioral science (Hägerstrand, 1970; Ajzen, 1991), this research arena has become increasingly active in recent years due to the increased availability and increased diversity of data, which call for the development of new analytical methods and new theories.

Various data sources have been utilized in the travel behavior literature. Roughly speaking, there are the "conventional data" (e.g., household travel surveys, questionnaire surveys) and the "new and emerging data" (e.g., mobile phone data, smart card data, social media data). Although there is no specific time stamp for the first appearance of the so-called "new and emerging data", this term has an increasingly close connection with "smart cities" (Townsend, 2013; Picon, 2015).

Despite the strong linkages, there has been little discussion about the intersection between smart cities, future/emerging transport and new/emerging data. We argue that certain challenges associated with the data for travel behavior research are associated with and can be addressed via smart cities projects and initiatives. By establishing smart cities as the backdrop, we can better engage in discourse about the challenges and opportunities for travel behavior data in connection with smart cities, where future and emerging transport modes co-exist with traditional transport modes and conventional and new/emerging data complement each other.

This paper will summarize the traditional data used for travel behavior research and then considers the discourse surrounding the development of smart cities and the associated new (and often big) data and analytical methods that enable the exploration of uncharted territory in travel behavior research. We will review recent advances to travel behavior research that utilize new and emerging data. These studies are grouped by four main types of new and emerging data: Global Positioning System and trajectory data, smart card data, mobile phone data and social media data. In addition, we will identify the potential value of other types of data in smart cities, such as charging data derived from e-mobilities, and present a visualization analysis of an example dataset. Finally, we will summarize key common challenges and opportunities related to data in the context of travel behavior research in the era of smart cities. We will conclude the paper with a brief recapitulation and discussion of potential future research directions.

Citations


Key Words: big and emerging data, ICT, future transport, smart cities, travel behavior

HOW ACCURATE IS OPENSTREETMAP BIKE INFRASTRUCTURE DATA? A COMPARISON WITH OPEN DATA FROM 50 U.S. CITIES
Abstract ID: 1123
Poster

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Bicycling is one of the most basic forms of active transportation and physical activity, delivering public health, environmental, and transportation benefits. While bike infrastructure data is essential for researching how to create safer, more equitable, and more accommodating environments for bicyclists, there has been a lack of accurate, standardized, and easily accessible data sources that can be used across cities. OpenStreetMap (OSM), a crowdsourced global map platform, has been praised as a decent alternative data source for active transportation research, but its quality has also been questioned by many researchers. A few studies (Hochmair et al., 2015; Ferster et al., 2020) examined bike infrastructure data on OSM in cities in the U.S. (i.e., Portland and Miami) and Canada (i.e., Montreal, Toronto, Vancouver, Halifax, Kelowna, and Victoria). Both studies made positive remarks on the data quality of OSM. While promising, this study further scrutinizes the accuracy of the bike infrastructure on OSM, looking at them at the segment level at a national scale.

The objective of this study is to evaluate the accuracy and completeness of OSM bike infrastructure data in the 50 most populous cities in the U.S. by comparing it against open data from municipalities. The study collects bike infrastructure open data created and published by municipalities. For comparison, the types of infrastructure in the open data are reclassified following the categorization of OSM: lane (i.e., dedicated bike lane on roadway), track (i.e., bike lane that is physically separated from roadway), and path (i.e., off-street trail or multi-use path for bicyclists and pedestrians). The network of both open data and OSM will be segmented for detailed comparison. We hypothesize that the accuracy of OSM bike infrastructure data will be correlated with the bike ridership of each city due to its crowdsourced nature. Thus, we also examine the association between the bike ridership and the quality of bike infrastructure data on OSM at the city level. This study discusses the quality of OSM bike infrastructure data based on the level of agreement between OSM and open data for different types of bike infrastructure across the U.S. Suggestions and caveats for researchers and policymakers are also discussed.

Citations


Key Words: OpenStreetMap, Crowdsourcing, Open Data, Bike Infrastructure, Bike Lane
THE INTERPLAY OF AGING POPULATIONS AND URBAN AGGLOMERATION: ASSESSING ECONOMIC SPECIALIZATION AND DENSIFICATION TRENDS IN US CITIES

Abstract ID: 1261
Poster

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Longer life expectancy coupled with decreasing birth rates has resulted in an aging population in cities around the world. This trend is more commonly observed in developed and industrialized cities, but shrinking cities in the periphery are also experiencing an aging population as younger, better-educated individuals gravitate towards larger cities with higher-wage, affluent job opportunities (Fol, 2012; Jingwen et al., 2022). It is crucial for city-level policymakers and planners to understand the complex relationship between spatial and economic agglomeration and the aging population. The aging population may drive urban densification as the demand for housing with more accessible amenities increases, although some may choose to move to sprawling cities with more space and cleaner environments. Additionally, economic specialization can impact the demographic makeup of a city by attracting or repelling certain age groups, which in turn affects the overall age distribution of the population.

In this background, this paper aims to investigate this relationship by exploring two research questions. (1) Does the aging population loosen economic agglomeration and urban densification? (2) Does the economic specialization of a city decide the trend? We evaluated the degree of urban agglomeration using the agglomeration index, which considers the travel time from surrounding regions to the nearest city, population density, and population of the nearest city, inspired by Uchida and Nelson (2010). After iterating the evaluation to more than 100 cities in the United States, we clustered cities into four groups – aging and agglomerating, age-decreasing and agglomerating, age-decreasing and sprawling, and aging and sprawling. Then, we analyzed the tendency between population age and urban agglomeration, as well as their economic specializations.

Our analysis shows that cities will agglomerate as their median age drops or if there is a population boom, while agglomerated cities will loosen up (sprawl) as their population ages. Trends varied by city’s economic specialization, with IT R&D cities clustering in the age-decreasing and agglomerating group and agricultural cities clustering in the aging and sprawling group.

Citations


Key Words: Aging population, Urban Geography, Urban Agglomeration, Clustering
INCLUSION ON WHOSE TERMS? (RE)EXAMINING THE ROLE OF PHILANTHROPY IN THE DIVIDED CITY
Pre-Organized Session 22 - Summary
Session Includes 424, 425, 426, 545

This pre-organized session explores the role of philanthropic community development in the planning of divided U.S. cities. Post-Fordist urban political economies have produced U.S. cities that are more spatially polarized by race, ethnicity, and income through uneven development. Logics of austerity, finance, and liberal antiracism have produced forms of urban governance where foundations and other philanthropic intermediaries play leading roles in planning interventions that target low-income and minority neighborhoods. While foundations often frame their community development initiatives as more participatory and inclusive than state-led planning interventions, many critical case studies trouble this claim. This session explores the dilemmas, limitations, and possibilities of philanthropic-led community development planning in the divided post-Fordist city. Presenters interrogate how philanthropists, and their intermediary institutions, intervene in planning processes, question who they include through participatory processes, and analyze the implications of this burgeoning field of planning in divided cities.

Objectives:

- To identify the dilemmas, limitations, and possibilities of planning within philanthropic-led community development.

WHO CAN AND OUGHT TO BE AT THE TABLE? CHALLENGES OF CO-PRODUCING A COLLABORATIVE GOVERNANCE NETWORK AND KNOWLEDGE OF REPRESENTATION
Abstract ID: 424
Abstract within Pre-Organized Session 22

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In this paper, I investigate an attempt to implement a “Capital Innovation” model of community development that prioritizes community investment finance systems by a network of prominent national foundations and financial institutions—Living Cities. In the past two decades, a group of large national foundations have shifted away from providing resources for community institutions and intermediaries that primarily work on neighborhood-level development. Instead, these foundations have increased their direct engagement in addressing city-scale issues, often advancing market-oriented economic agendas outside of formal planning processes. Ambitious urban initiatives such as the Detroit Future City Strategic Framework, the American Cities Initiative, and 100 Resilient Cities are illustrative of new forms of more direct involvement by foundations in city-wide issues.

A group of scholars in conservation (Beer 2022) and education policy (Reckhow and Snyder 2014) have noted two mechanisms that have shaped the shift: philanthrocapitalism and financialization, advanced through extensive networks of national foundations. Planning scholarship has also directed its attention to community development driven by a group of foundations and the market logic in it (Akers 2015; Fraser and Kick 2014). The focus, however,
has been primarily on place-oriented foundations and their pursuit of creating markets for outside investments and attracting new residents. Research that systemically investigates why and how national foundations and their networks pursue market-oriented approaches to community development at the city scale is still scarce in planning scholarship.

In this paper, I address this gap in the literature by conducting an in-depth case study of Living Cities’ attempt to implement its capital innovation model, The Integration Initiative (TII) in Cleveland, using the co-production framework (Jasanoff 2004) as an analytical lens. Despite the resources and financial expertise Living Cities brought in, the TII model did not fully materialize in Cleveland, resulting in the Cleveland Foundation’s withdrawal after the first three-year-phase. The guiding research question that I seek to answer is, therefore, “What are the challenges of implementing a Capital Innovation model of community development by large national foundations in American cities?”

Drawing upon mixed methods that combine archival analysis, non-participant virtual observations, and semi-structured interviews, this paper illuminates processes through which tensions and conflicts escalated between the local institutions and Living Cities, particularly around representation. Living Cities’ capital innovation model demonstrates a highly market-oriented vision of community development that underscores the ability of the local government and financial institutions to package development projects into financing deals in ways that optimize capital flow and galvanize outside investments. Living Cities’ pursuit of scale and impact based upon this capital-focused view created conflicts with the local partners, ultimately leading to failure to create new, shared knowledge of representation and to build a collaborative governance network it envisioned.

This research reveals three important challenges for both national foundations and their local partners when they seek to implement a national model of community development centered upon a financial system for capital formation and capital flows. First, a national model that is based upon a highly marketized view of community development can skew local priorities. Secondly, the case points out potential risks of failing to ensure fair representation of relevant stakeholders when implementing a market-oriented national model. A lack of fair and proper representation can reinforce power imbalance and fail to achieve better outcomes. Furthermore, not including those with lived experiences in the communities can result in missed opportunities to identify obstacles, improve processes, and achieve durable outcomes. Lastly, these findings suggest potential costs of embedding new ideas and practices advanced by national foundations into local cultural, historic, and institutional contexts, in terms of time, resource, and relationship.

Citations


Key Words: philanthropy, community development, economic development, financialization, representation

WHERE IS THE COMMUNITY IN PHILANTHROPIC COMMUNITY DEVELOPMENT? EXPLORING THE PROCESS OF COMPREHENSIVE COMMUNITY INITIATIVE IMPLEMENTATION

Abstract ID: 425
Uneven development and retrenchment of the public sphere under neoliberal capitalism has created increasingly poor outcomes for low-income and communities of color. To overcome poor neighborhood outcomes nonprofit organizations are increasingly becoming involved in the community development and neighborhood planning (Thomson, 2021; Lee & Harris, 2022). Since the 1990s, philanthropic foundations have enacted Comprehensive Community Initiatives (CCIs) as place-based, wholistic responses to the issues prevalent in low-income neighborhoods. While foundation leadership praise CCI ability to create neighborhood stability and engage residents in initiative implementation, scholars are far less optimistic about their outcomes or processes of public participation (Martinez-Cosio & Rabinowitz Bussell, 2013; Pill, 2019). Even more, the literature on CCIs has largely evaluated best practices of foundations without providing a sense of how CCIs involve residents in the planning, design, implementation, and evaluation of initiatives that affect their daily lives. Thus, this paper asks the question: how are CCIs integrating neighborhood residents into community development planning, design, implementation, and evaluation processes?

This research examines the public participation processes of two sites—Renaissance Heights in Fort Worth, Texas and the Forest Theater neighborhood in Dallas, Texas—where a CCI strategy called Purpose Built Communities has been enacted. Purpose Built Communities is a national organization that has worked with local foundations in 27 cities throughout the Eastern, Midwestern, and Southern United States to implement mixed-income housing, as well as education and community wellness programs. The study collaborates with residents, community-based organizations (CBOs), and faith-based organizations (FBOs) in participatory action research to better understand residents' views of philanthropic community development and design solutions to elicit more impactful participatory processes in CCIs. The project largely consists of surveys, interviews, and focus groups with racially and ethnically diverse residents in the two neighborhoods. Surveys and interviews will be used to understand residents’ ideas and desires for their neighborhoods and foundation processes of CCI planning, design, implementation, and evaluation. Focus groups will be used to ensure data analysis aligns with multiple resident viewpoints and help formulate community-based solutions to increased participation. I will engage these two neighborhoods by connecting with FBOs and CBOs in the surrounding areas to build trust with residents—who are largely African American and Latina/o—and recruit survey participants in each neighborhood. Through survey facilitation, representative residents in each neighborhood will be identified for interviews and ultimately participation in focus groups.

This research contributes to the field of CCI studies, urban planning and community development, and participatory research. First, this research connects the study of CCIs with broader debates about public participation and the use of participatory methods. Urban planning and community development literature have debated these topics for at least six decades and nonprofit organizations, such as foundations, would benefit from consultation with that work. Similarly, urban planning and community development scholars have been slow to recognize the importance of philanthropic foundations to the field. Foundations are becoming dominant stakeholders in community development and neighborhood planning. This study draws attention to philanthropic initiatives through a nation-wide strategy. Finally, my research project contributes to debates about the definition of public participation and the importance of participatory action methods. Through my research I involve residents in an examination of initiatives that affect their daily lives. The goal is to examine participation processes at these CCI sites in a way that residents and community leaders can utilize findings to demand an increased role in CCI implementation. This type of research is important in showing all stakeholders—public, nonprofit, and private—a model for engaging and co-producing with residents in community development.
This paper examines the philanthropic involvement of financial institutions in neighborhood planning and stabilization efforts since the financial crisis of 2008. Their involvement takes place in the wake of re-regulation and extreme consolidation of resources within the national banking system of the U.S. (Ashton & Christophers, 2018), as well as the system’s massive expropriation of Black wealth and dispossession of property through subprime lending (Dymski, 2009). It also occurs after decades of state retrenchment and restructuring, leaving local communities with little federal aid to support recovery efforts from the devastating outcomes of deregulated and racialized subprime lending, housing foreclosure, and abandonment (Newman and Lake, 2006).

This study asks, what effects have neighborhood-scale planning processes, backed by the charitable funds of multinational financial conglomerates, had on neighborhoods recovering from concentrated subprime lending?

In order to answer this research question, I conduct a comparative case study of three bank-led and -funded initiatives that have targeted Chicago’s Austin neighborhood since 2009. Although these cases only look at planning processes and outcomes in one neighborhood, the approach allows me to deeply explore the different approaches, motivations, and effects of bank-led planning initiatives within the same geographic and institutional context. My approach is exploratory and comes from both quantitative and qualitative data collected through my dissertation research. This includes newspaper articles, organizational documents, lending reports, and interviews of participants from the three bank-led community development planning initiatives. This data allows me to describe the events, actors, institutions, decisions involved in each planning process, as well as the perspectives of those actors involved. It also allows me to assess the various effects of these planning processes on the neighborhood, including both material conditions and relations that constitute Austin as a neighborhood territory, as well as discourses that represent Austin as a place and the role of financial institutions within that place.

My research finds that through initial charitable contributions to planning processes, multinational financial service firms are able to reposition themselves within the relations of the neighborhood from business/lender to funder/partner. This discursive and material repositioning allows these corporations to hold Austin-based nonprofits accountable for carrying out planning initiatives, delivering services, and general redevelopment/stabilization activities. It also complicates any sustained community organizing efforts capable of holding these corporations accountable for the harm they caused in the neighborhood through their business activities. Relatedly, these charitable donations also aid banks in their efforts to achieve satisfactory Community Reinvestment ratings with federal regulators, and to re-frame their respective institutions within the broader public discourse as responsible corporate citizens that champion development in Chicago’s most marginalized neighborhoods.
neighborhoods. I ultimately argue these charitable donations function as a type of “special money” (Zelizer, 2010) which not only fund community development projects, but produce new institutional arrangements and political subjects that govern Austin in ways that prevent political opposition to their business activities and maintain the hegemony of finance capital.

Citations


Key Words: Neighborhood, Planning, Finance, Philanthropy

WHAT CAN COMMUNITY BENEFITS AGREEMENTS LEARN FROM ALLIED POLICIES?
Abstract ID: 545
Abstract within Pre-Organized Session 22

GANNING, Joanna [Cleveland State University] j.ganning@csuohio.edu, presenting author

Community Benefits Agreements (CBAs) have risen in popularity and usage in the twenty-first century. The approach offers an intuitive appeal, involving community members in the process of articulating community needs while facilitating private investment during urban development processes. In practice though, CBAs can be interpreted along a spectrum ranging from promoting community engagement and equity to replacing public goods for private goods in an ongoing process of neoliberalism. While much has been written about the legal basis, goals, and challenges of CBAs, the challenges associated with them remain numerous and significant, and consequently the actual use of CBAs in the United States remains relatively uncommon. Yet, the need for CBAs and similar approaches has perhaps never been greater, given the escalating financial challenges in providing public services.

For many of the same reasons that CBAs have been produced, off-shoot policies and practices have emerged globally. For example, Impact Benefit Agreements are a codified version of CBAs that are used in projects involving Indigenous people, primarily in Canada and Australia. Relatedly, Community Development Agreements (CDAs) look strikingly similar to IBAs in that they apply to mining projects and Indigenous communities. The similarity is so close that older CDA articles appear to be describing IBAs before that term’s development. Contemporarily, though, CDAs typically operate in the context of developing countries. Given their geography, the World Bank has supported the development of CDAs. Unlike CBAs themselves, most closely related policies and programs have not been cataloged or analyzed systematically. Moreover, these allied policies and practices have operated in silos, with little effort to synthesize lessons learned across them. This paper catalogs and documents those allied policies and uses an Extending Review within the broader category of a Thematic Synthesis to identify what those policies offer in the way of practices and innovations that could be used to productively improve CBA policy in the US.

This paper utilizes a systematic literature review methodology. An initial scan, called the pre-review mapping, assisted in narrowing the research question: what do allied programs teach us in terms of innovations and best practices that could improve CBA practice in the United States? Keywords derived from the pre-review mapping were used to search for literature on nine allied policies. Papers underwent an initial screening and prioritization process. The 127 papers prioritized as high and medium-high were then read in full, evaluated for quality, and annotated into a zettelkasten-type database. From the database, lessons learned were extracted and synthesized.
across five broad themes (each of which with multiple sub-types): place-based, community engagement, physical development, benefit goals, and other lessons. These lessons learned are used to provide policy recommendations designed to strengthen CBA practice in the United States.

The findings include lessons across a broad range of issues. Many of the lessons, however, center on two meta-themes of the analysis. First, capacity building of community-based organizations presents a necessary and initial process for the success of any type of benefits agreement. Second, establishing the legal framework for both a policy and the property rights of various stakeholders convey powerful avenues to securing benefits.

Citations


Key Words: Community Benefits Agreements, Equity, Community Engagement, Neoliberalism

HBCU CENTERS OF EXCELLENCE AND PLANNING RESEARCH: OPPORTUNITIES FOR COLLABORATION AND PARTNERSHIP
Pre-Organized Session 64 - Summary
Session Includes 651, 652, 653, 654, 655

In 2021, the U.S. Department of Housing and Urban Development (HUD) awarded funding that established the Howard University Center of Excellence in Housing and Urban Research and Policy (CHURP) and the Texas Southern University Center of Excellence for Housing and Community Development Policy Research (CEHCDPR). Through these inaugural awards, HUD seeks to catalyze and ensure inclusivity of Historically Black Colleges and Universities (HBCUs) in sponsored research that expands housing and community development research efforts at HBCUs. The role of planning knowledge in advancing the HBCU perspective, via the two Centers of Excellence, about the barriers to, and paths for, improving the quality of life in underserved communities of color is the central theme of this pre-organized session.

Objectives:

- HBCU perspective advanced through planning knowledge

RIGHTS TO PURCHASE AND AFFORDABLE HOUSING PRESERVATION
Abstract ID: 651
Abstract within Pre-Organized Session 64

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To stem the tide of displacement created by the loss of affordable rental units in gentrifying areas, housing advocates have called for the expansion of policies that protect and expand tenants’ rights. In the nation’s capital area (DC, Maryland, and northern Virginia), several local governments have adopted unique anti-displacement policies that grant renters, nonprofits, local governments the “right to purchase” (RTP) rental properties being offered for sale on the private market. DC’s Tenant Opportunity to Purchase Act (TOPA), adopted in response to a wave of condominium conversions during the late 1970s, grants existing renters the right of first refusal to purchase rental buildings prior to going up for sale. Under TOPA, tenants can either purchase the buildings themselves, assign their rights to a third-party negotiator, or waive their right to purchase and vacate the building. Under Montgomery County, MD’s Right of First Refusal (ROFR) program, the county, the Housing Opportunities Commission (HOC), or any certified tenant organization has the right to purchase a rental property that is under contract for sale. In Prince George’s County, MD, the Department of Housing and Community Development (DHCD) holds the ROFR for multifamily rental buildings of 20 units or more. Prince George’s County may either purchase rental properties being offered for sale or assign its rights to an affordable housing developer. While the rise in gentrification-induced displacement has drawn attention to the need for new affordable housing preservation tools, less is known about the effectiveness of RTPs as a tool for preserving affordable housing and securing housing stability.

Differences between DC, Montgomery County, and Prince George’s County in the design of RTPs provide a unique opportunity to evaluate the effectiveness of RTP as an affordable housing preservation strategy. Using a mixed-methods approach, our study explores (1) the effectiveness of RTP policies as tools for preserving affordable housing; (2) how the differences in RTP design influence affordable housing outcomes; (3) what happens to buildings and tenants after the exercise of RTPs; and (4) what effects, if any, COVID-19 had on RTP-related outcomes. Answers to these questions will provide unique insights into the effectiveness of a unique and under-examined affordable housing strategy.

Citations

- National Low Income Housing Coalition. (2023): The Gap: A Shortage of Affordable Homes
- Kathryn Howell (2015): Preservation from the bottom-up: affordable housing, redevelopment, and negotiation in Washington, DC, Housing Studies
- Kathryn Howell (2018): Stability, advocacy and voice: opportunities and challenges in resident-led preservation of affordable housing, Housing Studies

Key Words: Affordable Housing, Preservation, Right to Purchase
and what we call the Purple Line Corridor, call for densification of residential and commercial activity around new stations. These areas already contain older apartments, condos, and homes which may be at risk for redevelopment.

Recent research has confirmed that light rail systems across the country (excluding the Purple Line Corridor) have seen such gentrification (Chava and Renne, 2021). Finio (2023) confirmed that gentrification is already occurring along the corridor, and the construction and this gentrification are having a disproportionate negative impact on existing small businesses. Further, recent research has highlighted that rents in multifamily buildings are already increasing in response to the construction of the line (Qiong et al. 2023). We hypothesize that these impacts are already causing residential displacement of low-income residents and ask: how much residential displacement of vulnerable populations is occurring in the Purple Line Corridor, and where is it concentrated?

Preliminary investigation of census data shows that the share of lower-income residents in the alignment Corridor is falling, while the share of higher-income residents is rising. With a novel source of data that tracts residential location over time, we construct a logistic model to predict likelihood of out-movement of low-income residents to other neighborhoods (Yang et al. 2021). Predictors include neighborhood socio-economics and demographics, proximity to the Purple Line, gentrification, and other factors. This information will add critical context to the ongoing debate over the amount of residential displacement attributable to gentrification around new rail transit stations (Nilsson and Delmelle, 2020). The model will show what share of low income residents have left the Corridor, and the types of neighborhoods they are moving to. It will causally attribute the likelihood of those moves to construction, proximity to the Purple Line, and other factors.

With results of the model in hand, we argue that speculative actions of landlords and developers, combined with the shifting preferences of higher income consumers, are combining to displace low-income tenants and homeowners in the Purple Line Corridor. This fact is of political importance given that both Counties have agreed, through a non-binding community development agreement, to preserve and produce new affordable housing for existing residents of the Corridor. We conclude with policy recommendations for planners dealing with potential gentrification in similar context, and emphasize that the time to address planning for affordable housing is well before construction begins on new transit projects.

Citations

- Peng, Qiong, Nicholas Finio and Gerrit Knaap. 2023. “Do multifamily unit rents increase in response to light rail in the pre-service period?” International Regional Science Review. Accepted, forthcoming.

Key Words: gentrification, displacement, transit

MORTGAGE LENDING AND BLACK HOMEOWNERSHIP IN TEXAS’ LARGEST CITIES
Abstract ID: 653
Abstract within Pre-Organized Session 64
Homeownership plays a large role in modern planning policy in American cities (Rohe and Watson 2007). Planners' find homeowners to be more actively engaged in their neighborhood, resulting in higher rates of neighborhood stability (Grinstein-Weiss et al. 2007). Yet the wealth returns on homeownership have been substantially less for Black homeowners than white homeowners. The legacy of neighborhood redlining as fixed in place through zoning policy accounts for some of this outcome (Pendall 2000).

Yet, changing planning policy and zoning rules may not be enough to achieve more equitable outcomes for Black homeowners leading to more stable neighborhoods in our cities. Mortgage lending practices play a disproportionate role in achieving higher rates of Black ownership. This analysis looks at the Home Mortgage Disclosure Act data for the six largest cities in Texas: Houston, Dallas, Fort Worth, Austin, San Antonio and El Paso. The rate of loan origination by race and ethnicity is analyzed by type of loan, type of census tract and type of financial institution.

The rate of Black homeownership is declining faster in Texas than the national average. This is surprising since Texas is growing faster than the national average. These declines occur across the six cities even with different housing cultures and market conditions. Often, lending is occurring at rates below current homeownership rates leading to the losses in Black homeownership. Second mortgage lending and home-equity lending to Black borrowers remain at very low rates. Exploration of loan origination rates across financial institutions show different rates of lending success with Black homebuyers. Institutions with CRA requirements also have varying rates of success (Park and Quercia 2020).

Building Black wealth then requires that we look at the successful financial institutions and build partnerships that expand upon their success. This finding then supports Korver-Glenn’s (2021) conclusion about how the real estate market as a whole reinforces segregation and economic inequity. Further work will examine zoning policy change and mortgage counseling programs in these six cities as possible elements of a wealth-building policy.

Citations


Key Words: Homeownership, Mortgage lending, Black homeownership, Texas

ALTERNATIVE TYPES OF HOUSING OWNERSHIP AND CLOSING THE RACIAL WEALTH GAP

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This paper presents a framework for understanding the connection between alternative forms of housing ownership and strategies for closing the racial wealth gap in low-income communities with a methodological emphasis on developing a taxonomy of alternative forms of housing ownership. Limited information about alternative types of housing ownership, such as housing in land trusts or housing owned by nonprofit organizations, is currently available for the US housing stock or among individual communities. Federal sources generally provide information on housing ownership as tenure in terms occupancy as either an owner or a renter, although these terms are becoming increasingly less useful to describe housing ownership in terms of how wealth in the form of housing is accumulated by individuals, households, business interests, nonprofit organizations, and communities-at-large (Hadden and Love, 2021; Lee 2017). Additionally, an increasing number of policies and programs are seeking to provide support for “social housing” outside of the household-based ownership model, such as renter-oriented community land trusts (Stone, 2006; Zehner, 2020).

A taxonomy of alternative forms of housing ownership is developed to carry out field work and data collection at the community level to document and understand the role of non-traditional forms of housing ownership, especially those that are the result of programs and policies supporting low-income households and nonprofit organizations that enhance wealth at the community level. A key purpose of this framework is to enable a standardized identification of alternative types of housing ownership at the community level as the basis for estimating the contribution of alternative forms of housing ownership to the accumulation of community-controlled wealth, as well as to evaluate existing and potential policies and programs intended to promote housing ownership as a means to narrowing the racial wealth gap (Shapiro, 2006).

Citations


Key Words: race, wealth, homeownership, housing, neighborhoods

QUIET EQUITY: RACIALIZED POLICY AND WHO GETS RELIEF FROM TRAIN HORN QUIET ZONES

Abstract ID: 655
Abstract within Pre-Organized Session 64

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Central Theme: Noise pollution is a significant environmental health issue for U.S. communities. In 2005 the Federal Railroad Administration’s (FRA) Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings (aka “Train Horn Rule”) went into effect. While the goal of the Train Horn Rule is to increase public safety at train crossing, the impacts of the noise externalities have become a major quality of life issue. The rule does allow individual communities the right to mitigate the impacts by establishing qualified “quiet zones,” where trains will not sound their horns, as long as the crossing has other acceptable existing safety measures. Creating a quiet zone requires communities to have the initiative to apply for quite zones and provide their own source of funding for any necessary upgrades needed to qualify. Furthermore, the only public entity with the legal right to designate or apply for a quiet zone is the public authority responsible for safety and maintenance of the roadway that crosses...
the railroad tracks. The creation of a quiet zone usually requires the collaboration/cooperation of many stakeholders, including residents, local and state governments, and railroad operators. This work will identify how local governments can assist low-income communities of color create quiet zones to eliminate train horns and their noise pollution. Preliminary research shows that low-income communities of color are disproportionally impacted by train horn noise. While railroads cut through different neighborhoods, through the processes of redlining, racial zoning, segregation, and the social determinants of health, in most cities, a preponderance of the impacted communities are home to low-income communities of color. Yet, higher-income communities, and especially those neighborhoods that are majority white, are the beneficiaries of quiet zones where the trains do not sound their horns. Before a quiet zone can be created, significant and costly traffic safety improvements must be made. When the Federal Railroad Administration started allowing for quiet zones, hundreds were established in cities across the US. However, in many places, they were put into neighborhoods with high social capital (among other resources) that were aware of their cities “quiet zone” program. It wasn’t long that cities ran out of funding to create quiet zones, leaving the full funding responsibility to the requesting neighborhoods. In this project’s study areas, most of the quiet zones have been built using funds raised by homeowner associations. The cities provide technical guidance to those communities with funding. However, many other areas are still impacted by noise.

Research Question: This whole study uses a mixed methods multiple case study approach to answer several research questions. However, this paper is focused on just one of those question: do communities of color have disproportionately fewer quiet zones than predominately white communities?

Approach and methodology: The study uses an analysis of the neighborhoods surrounding at-grade train crossing in Texas’s six largest cities (Austin, Dallas, El Paso, Fort Worth, Houston, and San Antonio). Using Federal Railroad Administration crossing data (which includes longitude and latitude for each crossing), we use ArcGIS Pro to create a database layer of the locations. To approximate the noise pollution of the train horn (decibels), we create buffer zones at .5 mile and 1 mile distances from each crossing and, when joined to Census data, we extract a list of Census Tracts within the buffers, and we designate crossings as with or without a quiet zone. For our cross-sectional analysis, the data base includes Census measures of social vulnerability, HUD programing (i.e. CDBG funds, public housing units, etc), and elementary school academic ratings. For our longitudinal analysis, the database includes Census measures of social vulnerability from 2000 (representing before FRA Train Horn Rule), 2010, and 2020. We use SPSS for statistical analysis to describe and explore the differences between neighborhoods with quiet zones compared to neighborhoods without quiet zones.

Citations


Key Words: Environmental Justice, Noise Pollution, Racial Disparities, Spatial Analysis
Indigenous ways of being, knowing, and doing have been present in and on the Land since time immemorial. Despite colonization and coloniality, Indigenous Knowledges prevail in the form of languages, cultural practices, and land relationships. Together, these Knowledges weave a system of theories and practices that enhance, among other things, Indigenous planning systems. Contrary to a Western approach, Indigenous methodologies are not monolithic; instead, they are defined by place and relationships of reciprocity, respect, and responsibility with the Land and sentient beings. In this view, when Settler-States engage in planning “for” Indigenous Communities with their conventional methodologies, how do they develop a planning process that understands Indigenous planning goals without a colonial framework? How do they account for the differences in knowledge systems? How do the results reflect the ontologies, epistemologies, and axiologies that are being shared in the planning process? This roundtable will discuss the importance of planning WITH Indigenous Communities. By sharing experiences working with First Nations, Tribal Nations, and Indigenous communities in different geographies, we will share and comment on the challenges and opportunities this approach entails. Particularly, we will emphasize the importance of perceiving planning as a process rather than an outcome. Beyond planning for/on as a prescriptive or restrictive approach, we believe that planning WITH Indigenous Communities represents an approach for reimagining the future of planning.

Citations


Key Words: Land, Indigenous planning, Indigenous community planning, Indigenous knowledges, Community-engaged
Classical visions of progressive cities in the U.S. took questions of economic inequality as their base. Echoing the community organizing dictates of postwar figures such as Saul Alinsky, these visions valued activists who advocated visions of equality rooted in jobs, wages, and public investment. Since the Great Recession, a large, diverse, and effective cohort of organizers has emerged. Alongside class-based progressive politics, this cohort emphasizes other cross-cutting axes of inequality (e.g., gender identity, race, immigration, disability) in their diagnoses of social ills in their communities; in their construction and legitimation of espoused policy solutions; in their activation and mobilization of the grassroots; and in their claims-making practices. Bolstered by the language of intersectionality, racial justice and (to a lesser extent) decolonization, the who, what, and how of community organizing are shifting in ways that planning scholarship has yet to address. This topical discussion panel brings together planning scholars who study the politics and practices of contemporary community organizing in order to evaluate these organizers’ efforts to integrate advocacy for diverse and varied visions of justice.

Building from their own fieldwork, each panelist will assess the following questions:

How do activists combine coalitions rooted in different identities and communities of practice?
What are the implicit or explicit theories of change in community organizing practice seeking to bridge advocacy efforts across multiple marginalized communities and/or policy domains?
What challenges do these cross-cutting organizing practices carry?
How does centering identity change advocacy for issues that researchers do not see as identity-based issues?
How, if at all, do visions of economic justice factor into these cross-cutting movements?
How do these movements operate in hostile jurisdictions, including the ACSP host state of Florida? Each panelist will briefly address these questions, based on their current research. The moderator will then incorporate audience members into the discussion by asking them to share their recent organizing experience and to provide examples of the contribution of identity to political issues in their own work.

Citations


Key Words: Community organizing, Economic justice, Racial justice
Abstract. The nation’s once-in-a-generation public investments in infrastructure and accelerated climate action are raising the stakes associated with three of planning’s biggest and most persistent challenges. The first is how to reconcile the “greater good” with the “local good,” for example where proposed projects that may have regional, national, or even global significance pose potential harms as well as benefits to local communities and ecosystems. This is doubly important in communities of color and low-income communities that have suffered histories of exclusion and harms—including generational “root shocks” to their wellbeing, livelihoods and wealth, and cultural space—from past decisions by government, market actors and other institutions. But it also applies to the forms and effects of NIMBYism in public life and governance. The second challenge is at once technical, cultural and political: how to generate, and make judgments about, meaningful indicators for a range of potential project impacts that are just that—things that have not yet happened, are uncertain, contingent, distributional and often contestable—subject not only to racial, cultural, gendered and other lived experiences and inequities but distributional effects that allocate material gains and losses unevenly. And the third challenge is authentically and effectively engaging affected communities in shared discovery and decisionmaking, surfacing new insights as well as new and alternative solutions, including those that heal—reflecting principles of reparative justice. In the context of historic calls for racial reckoning and renewed debate about the role and moral obligations of planning and planners, including the need for a deep and enduring commitment to antiracism, it is vital that the field have widely available tools to help stakeholders, from local to global, to make more informed and legitimate judgments about proposed changes to the built environment. Building on planning’s long debate over how to assess the social impacts of proposed interventions and help address the limits of conventional cost-benefit analyses, this roundtable session features researchers and thought leaders, advocates and innovators working at the cutting edge of these questions and offering planning’s diverse stakeholders and publics new tools and possibilities for action and learning. As a point of departure, the discussion will examine the field’s response to Smyth and Briggs’s viewpoint essays in Planning magazine, The Infrastructure of Wellbeing (2021) and How to Create Shovel-Worthy Infrastructure (2022), which led to the development of an open-source innovation, the Wellbeing Insights, Assets and Tradeoffs Tool, now in beta testing and evaluation locally; the collaborative development and dissemination of PolicyLink’s Building for the All: Infrastructure Equity Standards (endorsed by many leading policy and advocacy organizations) and a new Justice 40 project vetting tool; and The Urban Institute’s Capital for Communities Scorecard, likewise tied to a larger program of research and practitioner learning.

Citations


Key Words: racial equity, project appraisal, infrastructure, community development, wellbeing

RACIAL EQUITY, COVID-19 AND PUBLIC POLICY: THE TRIPLE PANDEMIC

Abstract ID: 1313

Roundtable

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This session is focused on the book entitled Racial Equity, COVID-19 and Public Policy: The Triple Pandemic. The book is an edited volume focusing on the health, economic, and justice impacts of the COVID-19 pandemic on racial equity. The book does not simply document the problems made worse by the pandemic, but it provides historical context to the issues that rose to the surface in new ways, the existing inequities revealed during COVID-19, and old, new, and policy responses to them. The volume is distinguished in its focus on the implications for racial equity through an examination of both existing public policy and new ideas for change.

This period of American history and politics is unique in many ways, but most notably by the convergence of major threats to public health, economic livelihood, and access to justice. The triple pandemic resulted in contested debates, public health disagreements, protests, and elections. Its impacts will be felt in the coming years and will continue to unfold, depending upon the adequacy of the contemporary response. This book responds to audiences seeking a better understanding of the events that occurred, the conditions that set the stage for their eruption into wider public view, and what might be done to prevent the underlying social and racial inequities in the future.

This book is about the health, economic, and justice impacts of the COVID-19 pandemic and their implications for racial equity. It is also about the reasons why the events unfolded as they did. Historical background and context are applied to illustrate that many of the structural inequities that came into view during the pandemic were longstanding and embedded in the way economic, health, and justice institutions function in the U.S. The pandemic crisis exacerbated their brokenness. The results were predictable when a few incendiary events served as flashpoints for public and political outrage about the victimization of many, who were already vulnerable from unjust public and private systems.

The chapters in this book are authored primarily by faculty in the L. Douglas Wilder School of Government and Public Affairs at Virginia Commonwealth University. The panel will feature some of the authors speaking on the significance of the book and what has happened recently in relation to its core topics.

Citations


Key Words: Pandemic, Equity, racial justice, Policy

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Track 2 Individual Paper Submissions

CONVIVIALITY AS COEXISTENCE, CONFLICT, AND NEGOTIATING LOCALITY: EVERYDAY URBAN MULTICULTURE IN PANTANG, GUANGZHOU

Abstract ID: 27

Individual Paper

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The study explores the concept of conviviality as it applies to everyday urban multiculture through a case study of Pantang in Guangzhou, China. Conviviality, simply meaning “living together” with a positive connotation in English, has been a prevailing concept in understanding and analyzing diverse populations and their multicultural social relations across different disciplines, including sociology, anthropology, geography, and urban studies (Vodicka and Rishbeth, 2022). The exploration of conviviality navigating beyond the positive notion of diversity can add political insights to dominant cultural norms, ethnic integration, social participation, gender relations, and urban policy, which is increasingly called for in existing studies (e.g., Radice, 2019). This study investigates how conviviality is manifested through coexisting with diversity, experiencing conflict, and negotiating as an evolving locality.

Drawing on 19 months of participatory observation and in-depth interviews, this study demonstrates different aspects of conviviality in Pantang under drastic transformation. Pantang, an aging urban community, becomes significantly multicultural due to the interrelating forces of industrialization, modernization, and recent urban regeneration. Consequently, it creates diverse spaces, including wholesale centers, dim sum joints, public parks, handshake residential buildings, wet markets, and cultural and creative stores. These urban spaces host various social interactions and relations, showcasing Pantang as a neighborhood filled with contrasting cultures between traditional and modern, natural and built, authentic and inauthentic, inclusive and exclusive, and local and global.

Contemporary Chinese cities have experienced unprecedented socioeconomic, environmental, and digital transformation under rapid urbanization and globalization. Particularly, urban regeneration in China has become a significant component for solving as well as generating multifaceted development challenges. Urban regeneration in Chinese megacities, such as Guangzhou, has increasingly highlighted a culture-driven approach to high-quality urbanization through more so-called people-centric and pioneering redevelopment projects, transitioning from the large-scale physical transformation of state-sponsored property-led rebuilding (Liu et al., 2019).

The study centers on Pantang, one of Guangzhou’s historical neighborhoods undergoing micro-regeneration. As an urban village rich in its history and cultures, Pantang presents a dynamic of everyday multiculture through engaging local property owners, migrant workers, small business owners, regular park users, and tourists with various public-private spaces. Specifically, conviviality is a complex concept that involves coexisting and conflicting perceptions and lived experiences of multicultural landscapes, and forms the dynamic negotiation of locality.

Conviviality is a helpful concept in analyzing multicultural landscapes and social relations in diverse populations (Neal et al., 2019). However, most current discussions of conviviality are based on developed Western cities, and perspectives from the Global South are inadequately represented (Hemer et al., 2020). This study explores how diverse populations have demonstrated multifaceted conviviality given drastic socioeconomic changes and environmental impacts. It highlights that Pantang’s different definitions, implications, and implementations of everyday urban multiculture have coexisted, integrated, and conflicted.

In particular, individual perceptions and experiences of everyday urban multiculture generating through the physical spaces in Pantang coexist and compete among diverse populations in terms of self-identity attachment and socioeconomic backgrounds. Further, layers beyond the binary of coexistence and conflict become vital to local community building, adding nuances to the notion of conviviality. Specifically, traditional, modern, commercial, non-commercial, political, and non-political everyday urban multicultures are perceived and practiced, negotiating the locality of Pantang as a diverse, inclusive, and dynamic multicultural urban community. The study provides insight into contemporary placemaking in the face of Asia’s rapid urban transformation. It adds a Chinese city perspective to the heated discussion of drastic urban neighborhood transformation in Asia beyond gentrification.

Citations


Key Words: Conviviality, Urban multiculture, Locality, Community, China

PLANNER-LED COLLABORATIVE GOVERNANCE AND THE URBAN FORM OF URBAN VILLAGES IN REDEVELOPMENT: THE CASE OF YANGJI, CHINA

Abstract ID: 48
Individual Paper

GONG, Yue [Wuhan University] yuegong@whu.edu.cn, presenting author

While urban redevelopment has been a prevailing urban phenomenon for many decades, the redevelopment of urban villages (villages-in-the-city or chengzhongcun) has become popular in China. Urban villages are an important type of urban neighborhoods in China. They have a dense and dilapidated built environment and mainly house huge poor rural migrants, in contrast to Western urban villages. The redevelopment of urban villages has drawn increasing scholarly attention during recent years. Many studies have examined the political and socio-spatial dimensions of urban villages, but surprisingly few studies have paid attention to their changing urban form. Many studies have examined the governance structure of redevelopment such as the roles, strategies, and actions of local governments, the market, and communities. However, limited studies have focused on the urban planning forces and their impacts on urban villages in redevelopment, especially on their transforming open spaces.

In response to the above literature gaps, this paper examines how urban planning transforms the urban form of urban villages, especially their open public spaces. It carries out a case study of Yangji Village in Guangzhou, Guangdong Province. The redevelopment of Yangji represents the transformation of an urban village under multiple stakeholders’ governance, which is vigorously promoted by the government. Data were collected through interviews and observations and from village archives. Between August 2020 and May 2021, we conducted six semi-structured interviews with 12 key persons, such as senior planners and village leaders, who were involved in the redevelopment. We also interviewed six villagers and four tenants in Yangji and collected maps and documents, such as the archives of Yangji history and redevelopment, to enrich the data.

This study argues that the large increase in public spaces associated with the transformed form of Yangji results from collaborative governance driven by the trend of urbanization and urban planners who have state support, professional knowledge, and the incentives of public interests. Yet such a planner-led collaborative governance remains in a limited sphere where stakeholders’ economic interests are marginal and migrant tenants are excluded from the decision-making process of planning and redevelopment. As empowered state agents, planners have the privilege to negotiate and coordinate with other stakeholders, and occasionally manipulate them for public interests rather than economic growth, thus creating collaborative dynamics. Although rarely regarded in the literature as a key role in redeveloping urban villages, urban planners are highlighted in this paper as a salient force of the urban morphology of urban villages. Redeveloped urban forms, rather than stakeholders’ economic profits in short-term redevelopment, may influence urban life in a long term through planners’ efforts. This paper highlights the importance of urban planners to urban redevelopment and collaborative governance and enriches our understanding of the transformation of urban villages in China. Urban planners in China’s authoritarian regime...
are not passive actors, but can greatly influence urban (re)development for the public if they can strategically obtain state support, tactically use their expertise, and align these efforts with public interests.

Citations


Key Words: collaborative governance, urban planner, urban redevelopment, urban form, open space

CENTERING ARTIST VOICES: A SURVEY OF ARTISTS AND CULTURAL WORKERS IN PHILADELPHIA, PA AND RICHMON

Abstract ID: 66

Individual Paper

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Art and culture are important tools in the planner’s toolkit, long considered a driver of urban quality of life, as well as community and economic development (Frenette, 2017; Markusen & Nicodemus, 2020). Yet the labor of artists often remains hidden. A recent report from the American Academy of Arts & Sciences emphatically declares that “Art is Work,” and that art is valued as a positive public good. Yet that same report acknowledges that artists are fundamentally undervalued as workers in surveys of the American public (American Academy of Arts & Sciences, 2021). Why the disconnect between the value that Americans place on the arts and a lack of regard for artists as the workers who make arts and culture possible? Now is the time to reckon with the important contributions artists make to society and economy. The COVID-19 pandemic only underscored the precarity of artist livelihoods.

This paper explores artist experiences by attending to the voices of artists themselves. Prompted by an earlier phase of focus group research in Philadelphia with artists who voiced their needs as workers (Teresa & Zitcer, 2022), we undertook a survey of working artists in Philadelphia and Richmond, Virginia. This survey research asks about the spatial patterns of artists living, working, and presentation locations and how that geography has changed over time, as well as how artists have weathered the pandemic in two cities.

The survey was conducted online from October 2021 through September 2022, with 88 artists from Philadelphia, Pennsylvania and 59 in Richmond, Virginia participating. While less than half of artists responding to the survey reported making art as their full-time job, a significant number, 65%, indicated their desire to do so. The most frequently cited sources of support for art-making were grants and non-arts related day jobs. Over 80% of surveyed artists from both cities report being satisfied with their quality of life; however, nearly half were dissatisfied with the state of their mental health, and in Richmond 63% indicated they were dissatisfied with the amount of time they were able to devote to art, compared to 43% in Philadelphia. In open-ended questions about the impact from the COVID-19 pandemic, most respondents indicated that COVID had negatively impacted artists’ ability to show their work. Others noted that the pandemic also negatively impacted their mental health, which
helps contextualize responses about the dissatisfaction with the state of mental health.

When asked in an open-ended format about what would help artists make and show their art, the survey participants offered many suggestions. By far the most frequent responses the participants gave were focused on expanding public support for the arts and artists themselves. These answers included both targeted public spending and support for artists and artistic spaces as well as more general public investment in things that would benefit a wider group beyond the arts community, such as affordable housing and universal basic income.

This research contributes to an actor-centered approach to understanding artists’ livelihoods in two US cities and their ideas for solutions to the challenges they face. Finally, the survey results also contribute to understanding the methodological challenges of executing such an actor-centered approach in a way that captures the variety and diversity of the artistic community across multiple dimensions of artistic practice, gender, race and ethnicity, and class.

Citations


Key Words: arts, culture, policy, creative class, community development

THE ANTI-RACIST CITY: HOW ELECTED OFFICIALS DEFINE AND UNDERSTAND IT

Abstract ID: 79
Individual Paper

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Many city residents and scholars understand how cities can exhibit racism through processes like planning and governance. Critical urban scholars have theorized and articulated how racism is embedded in these processes, from redlining and urban renewal to zoning laws, that have disproportionately impacted Black, Indigenous, and People of Color (BIPOC) communities (Oberly & Reece, 2023; Stafford & Ladner, 1969). As a result, there is growing recognition of the need to incorporate anti-racist principles into urban planning and design.

One key area of anti-racism work in planning has been adopting equity-focused approaches to community engagement and decision-making (Melendez & Hoff, 2022). This includes strategies such as participatory budgeting, community-driven planning processes, and the inclusion of diverse voices and perspectives in decision-making. By centering the experiences and needs of BIPOC communities and other marginalized groups, these approaches seek to create more equitable outcomes in urban planning and development.

In urban planning, there is a push to incorporate social justice and equity considerations into policies and practices. This includes efforts to rectify historical legacies of racism and inequality through reparations for communities impacted by discriminatory policies. Additionally, it involves developing new policies and practices, such as
inclusive zoning laws, anti-displacement strategies, and prioritizing affordable housing and community-owned development. These changes occur within the social and political landscape of city governments (Solis, 2020).

This project aims to study the social and political landscape of anti-racism in mid-size U.S. cities, where elected officials are increasingly using the term. We were inspired by the statements made by Tacoma's Mayor Victoria Woodards during her first and second terms. Our research seeks to answer the question: What do mayors and other civic leaders mean when they say they want their city to become "anti-racist"? We collected data from 33 mid-sized cities (with a population between 200,000 and 250,000) by analyzing publicly available documents on their websites that express their intention to become anti-racist.

Our project aims to identify how city and civic leaders define the location of racism within their cities and who they hold responsible for creating an anti-racist city. Our research is guided by two secondary questions: 1) Where do mayors and elected officials identify racism within their city's current forms and processes? And 2) who or what do elected leaders view as responsible for achieving the transformation of their city into an anti-racist one?

Out of the 33 cities we analyzed, only two had explicit anti-racist agendas. These agendas included creating a transportation policy with an anti-racism philosophy, promoting equity and anti-racism by ensuring diversity in committees, boards, and commissions, and passing a budget that supports anti-racist systems transformation.

The implications for practitioners and educators are myriad; however, we see one immediate and necessary goal for this research: to help scholars and practitioners distinguish between politically-expedient discourse that merely applies the term “anti-racist” from actions and revisions to governance practices that transform cities into less racist places. Our research, even at its early stages, suggests that many elected officials may well be using “anti-racist” inaccurately or, even if they understand it as a process that goes above and beyond not being racist, without a substantial plan to support and promote a way of planning, developing, and governing cities that would effectively transform the city as they know it. To the extent that academics, practitioners, and elected leaders find some alignment in what it actually means to pursue the “anti-racist city,” we find an opportunity to continue to interrogate the ways this term and concept emerge in the discourse around cities in the U.S.

Citations


Key Words: anti-racism, cities, content analysis, elected officials

RESEARCH ON SOCIAL PERFORMANCE MEASUREMENT AND INTERNAL MECHANISM OF PARTICIPATORY COMMUNITY REGENERATION FROM THE PERSPECTIVE OF SOCIAL NETWORK: A CASE STUDY OF XINHUA COMMUNITY IN CHANGNING DISTRICT OF SHANGHAI

Abstract ID: 102
Individual Paper

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The extensive growth of Chinese cities in the past 40 years has accelerated disintegrating the social foundation of local communities. Due to the "double aging" of buildings and population, old residential areas in cities are facing more serious problems such as social isolation and weak public awareness. In recent years, innovative social organizations, represented by the Big Fish Community Design Center in Shanghai have been committed to taking community regeneration as an opportunity to improve social relations of old communities through public engagement. However, the traditional construction-oriented community planning only takes space performance as the evaluation standard. Therefore, the research on the social performance measurement of public engagement beyond formal government and the internal mechanism of reshaping community has become an urgent need to further promote community regeneration and inclusive community development. So, how to measure the social performance of participatory community regeneration? How can social organizations support community actors and provide rich possibilities for participation? How to reshape the community through public engagement and innovative mechanisms? Social network analysis provides new research perspectives and analytical tools.

Big Fish, born in Xinhua Community in Shanghai is a social organization that always adheres to the "local companionship" community building model and the "participatory design" urban regeneration path. It has created a community regeneration model in which all ages participate and all parties win-win in a typical old community in Shanghai, realizing the simultaneous regeneration of physical space and social relations.

This research uses quantitative analysis and qualitative research methods. On the one hand, various research methods such as semi-structured interviews, questionnaires, and mapping are used to collect relationship data between individuals before and after community building. In order to build a social network analysis model, an index system including three levels of whole, partial and ego network is constructed to comprehensively measure the social performance of community regeneration. On the other hand, through qualitative research methods such as literature research, field investigation and inductive reasoning, three new types of communities including new business-related community, new job-related community and new value community are proposed, and their internal action mechanisms are analyzed.

The findings of this research are as follows. Based on quantitative measurement, participatory community regeneration can integrate social capital and effectively activate public life. Public action makes community links more resilient, and open participation based on free choice can improve social network hierarchy. Periodic collaboration and continuous empowerment improve the connection degree of individuals, and distributed collaboration improves the hub degree of individuals. Based on qualitative analysis, firstly, the three social capitals of community commerce, including community links generated by consumption behaviors, shared networks among merchants and social links through community building and public activities, have built a new business-related community. Secondly, the three kinds of action empowerment created by community building, including encouraging participation in the discovery of the community, professional empowerment to facilitate innovation, and stimulating mutual assistance and independent drive, build a new job-related community. Thirdly, the three growth logics of social network, including the consensus of local charm, the co-negotiation of multi-community, and continuous co-creation, have built a new value community.

This research quantitatively measures the social performance of participatory community regeneration, breaks through the traditional evaluation system that takes physical space as the only standard, and has important theoretical value for community research in contemporary China. At the same time, the qualitative research part deeply analyzes the internal action mechanism of public engagement, which has certain guiding significance for optimizing community regeneration, promoting community building, and improving community co-governance in practice.

Citations

- Tönnies F. Community and Society[M]. Shanghai: The Commercial Press.2019
RE-DISCIPLINING 'URBANIZING VILLAGES' IN CHINESE SMART URBANISM: PERFORMING SMARTMENTALITY IN FUTURE COMMUNITY

Abstract ID: 130
Individual Paper

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Scholars have spent decades studying different forms of governmentality and their social implications. The concept of ‘smartmentality’, has been invented to articulate a new mode of governmentality wherein ‘smartness’ is instrumentalized as a disciplinary strategy, to discipline a wide range of socio-economic activities in the name of ‘smart urbanism’. However, it is not clear about the underlying motivations, concrete mechanisms and socio-spatial implications of performing smartmentality at the finer neighborhood scale. This paper attempts to fill this gap.

China's transformed neighborhood governance and community revitalization strategy are good materials for urban governmentality studies. The proliferation of “urbanizing village” since the late 1980s constitutes a great spectacle of informality and self-organization in Chinese urbanism, while later redevelopment and formalization led by variegated state initiatives and market approaches imply the reformulations of governmentality. Urbanizing such rural neighborhoods for capital accumulation is not news. What is new is the underlying, powerful governmentality to deliberately transform and thoroughly re-discipline erstwhile ‘urbanizing villages’ into a part of urbanity that is ‘governable’, formal and under-bureaucratized. Such rural-urban revolution manifests new governing technologies, restructured power relations and socio-spatial landscapes at the neighborhood scale, yet have not been adequately explored in current studies.

Performing smartmentality through a variety of smart city initiatives has entrenched in China’s emerging urbanism. Since 2019 a new form of community-revitalizing campaign, Future Community (weilai shequ), has been initiated in Zhejiang province. This program targets to redevelop urbanizing villages inherited from the rapidly-urbanized past, while it does not simply follow the line of previous state-led ‘redevelopment-by-demolition’ model and spatial governmentality, nor the capitalist logic for economic growth or land premium making. Drawing on an in-depth case study in Hangzhou, we find this community-revitalizing strategy using the headline of ‘future’, essentially served as a smartmentality deployed by the state, as characterized by new digital-surveillance infrastructures, re-discipline of social conducts and governance fabric with the utopian narrative of smartness. We argue this smartmentality is exercised as a response to crises of capital accumulation and social reproduction as well as the new top-down political mandates.

This paper first develops a theoretical framework to coherently uncover the underlying motivations, concrete mechanisms and socio-spatial implications of smartmentality. We crystalize the broad concept of smartmentality with three key parameters comprising the digital reconfiguration of the built environment, digitalizing existing social activities and reorganization of the governance fabric. Our empirical study interrogates how Guashan...
neighborhood of Hangzhou operationalized smartmentality both materially and discursively to re-discipline an informal, self-organized ‘urbanizing village’ into a formal, governable ‘future community’ in smart urbanism. This paper highlights the implication of smartmentality on inclusive development at the neighborhood scale.

This study could contribute to the extant literature in two ways. First, it refines the conception of smartmentality with new theoretical anchors and comprehensive framework, then pegging on evidences demonstrating the pre-emption of smart urbanism in neighborhood governance and rural-urban transformation. Second, it grounds the concept of smartmentality within the context of ‘state entrepreneurialism’, regarding that smartmentality is not only ‘state-steered’ in China, but also ‘state-rowed’ as the local state proactively invents and deploys new socio-spatial planning, policy discourses, various market and technological instruments. Per these contributions, this work enables readers to better understand the governmentality in contemporary smart urbanism and its role in disciplining neighborhoods.

Citations


Key Words: smartmentality, smart cities, neighborhood governance, community revitalization, urbanizing villages

AN EMPIRICAL EXPLORATION OF THE IMPACT OF CITIZEN E-PARTICIPATION IN UNDERSERVED NEIGHBORHOODS

Abstract ID: 153

Individual Paper

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This research project investigates whether the high level of citizen e-participation leads to more equitable government service delivery, improves neighborhood conditions, and enhances the quality of life for neighborhood residents, especially in inner-city underserved neighborhoods. Recently, scholars and practitioners have been optimistic about the potential of technological advancements and big data in community development, urban planning, and local governance (Clark et al., 2020; Evans-Cowley & Conroy, 2016; Ruijer et al., 2023; Seifert & Peterson, 2002). Despite increasing interest and theoretical debates, empirical studies have not adequately assessed the effectiveness of technological advancements and big data in improving underserved neighborhoods. This research project proposes an empirical study that fills this gap. This study conducts a case study on Kansas City, Missouri (KCMO) neighborhoods. It uses contacting the City's 311 center for service requests as a proxy for citizen e-participation. It reviews government responsiveness (the outcome of service-request 311 calls) to investigate whether active citizen e-participation leads to more equitable government service delivery by analyzing the "days to resolution" for each request among neighborhoods. Different cases require services from different agencies, and some cases take longer to resolve. Therefore, data analysis takes careful and systematic consideration of the variety of nature of service requests and agency assigned. Finally, using the longitudinal KCMO Resident Survey, U.S. Census, and KCMO administrative data, the study examines the associations among citizen e-participation and resident satisfaction and neighborhood improvements between 2011 and 2022. 311 calls are jointly determined by a citizen’s propensity to participate and by the occurrence of a concrete problem that the citizen can report to a 311 line (Minkoff 2016). Therefore, the study performs regression while controlling for contacting-propensity variables (percent homeownership, median income, percent of households with kids, percent minority, number of non-profits per 1,000 residents, and crime rate) drawn from the literature. It further
controls the potential digital divide—the capacities of community stakeholders to participate. This research's findings will inform policymakers of the potential and limitations of citizen e-participation systems in government service delivery in serving the needs of underserved neighborhoods and enhancing the quality of life for neighborhood residents.

Citations


Key Words: citizen e-participation, 311 data, community development

PLACEMAKING, PLACEBREAKING: TRACING UNEVEN URBAN DEVELOPMENT AND ORGANIZED RESISTANCE IN THE TWIN CITIES

Abstract ID: 214
Individual Paper

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Planning literature has long discussed the concept of placemaking: the idealistic push to make newly developed, dense, walkable, sustainable, and mixed-use spaces (Thomas 2016). There is an emergent push to pay more attention to the destruction of the cultural, physical, and personal identities required to create these new places (Dantzler 2021). This paper introduces the concept of “placebreaking”, defining it as a process rooted in racial capitalism by which planners, developers, and other private actors displace and destroy often low-income, Black, Indigenous and communities of color. In doing so, planning practices uproot existing places where people already live, work, and play in, to create more profitable urban landscapes. This paper is based on an analysis of two Minnesota neighborhoods: Rondo, a mostly Black neighborhood in Saint Paul, and East Phillips, a diverse Latine, Black, and Indigenous neighborhood in Minneapolis. In the late 1950s the construction of the I-94 highway destroyed significant portions of Rondo. In East Phillips, a number of polluting industries between the 1930s and 1970s resulted in severe arsenic contamination and a Superfund declaration for the neighborhood. I trace each neighborhood from these early planning decisions to ongoing organizing around the redevelopment of these areas today. Various organizations have developed competing plans for redesigning the neighborhoods around I-94. Meanwhile, the East Phillips neighborhood of Minneapolis is the site of rapid gentrification pressures and an ongoing fight for a community hub and urban farm on City-owned land.

Using these paired cases, this paper analyzes interviews, planning documents, reports, maps, news articles, and meeting transcripts to show how government and private actors use placebreaking and placemaking to destroy and create places. I also show how affected communities resist these oppressive practices through everyday and organized actions to protect and improve their existing communities. I ask: a) What do Rondo and East Phillips reveal about the relationship between placemaking and placebreaking and the various forms these planning practices may take? b) How do communities and organizers resist placebreaking practices in each of these neighborhoods and assert their own plans for reclaiming a place?
This paper argues that placebreaking precedes placemaking and that it is critical urban planners understand the foundations it sets. Despite the intentions of planners to simply make beautiful, well-organized, equitable places, their ties to real estate interests reshape places for the profit of white, capitalist development (Stein 2019). I show how direct, large-scale forms of placebreaking resulted in the rapid destruction of homes and businesses in Rondo. Meanwhile, indirect, speculative forms of placebreaking imposed slow violence on the East Phillips neighborhood (Nixon 2011). Community members and activists engaged (and continue to engage) in organizing that resists the placemaking and placebreaking efforts of city planners and developers through advocacy for their communities. Communities and organizers challenge the status quo, demonstrate transgressive forms of planning, and compel us toward a more just planning field and discipline (Pulido, Kohl, & Cotton 2016).

Citations


Key Words: placemaking, racial capitalism, gentrification, activism

BREAKING THROUGH STRATIFICATION: ACCESSIBILITY, SOCIOCULTURAL STATUS AND FAMILY CULTURAL PARTICIPATION IN SHANGHAI, CHINA

Abstract ID: 219
Individual Paper

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Accessibility to cultural amenities has long been recognized as a crucial determinant of cultural participation and social equality. China has undergone rapid urbanization in recent decades, leading to an exacerbation of the unequal distribution of public services (Bai, Shi and Liu, 2014). The inequality for varies of public services directly result in constrained resources for certain groups, generally the disadvantage group, and further negatively influence their quality of life (Squires & Kubrin, 2005).

The equality of cultural participation has gained much attention by scholars from different fields, both socially and spatially. However, sociological and geographical literature tend to explain how personal behavior and choices are restricted from either the viewpoint of social processes or the objective resources provided by physical space. While classical sociological theory, such as Social Space Theory (Peterson, 1992) has emphasized the role of social stratification in family cultural engagement, the significance of place remains an understudied dimension in sociological investigations (Widdop & Cutts, 2012). On the other hand, abundance of geographic works has dissected the relationship between spatial accessibility and individual’s opportunity to visit and knowledge of the locations of institutions and facilities including cultural facilities ( Houston & Ong, 2013).

Given the essential role of public cultural facilities (e.g. libraries, museums, cultural centers, memorials, and art galleries) for social wellbeing and personal development, this study adopts an interdisciplinary research framework that combines sociology and geography to address the following questions in China’s context--How are cultural amenities spatially and socially unequally distributed and to what extent are geographic distance and sociocultural status associated with cultural amenity attendance? How do these relationships differ within and without walking distance? Using data from the first wave of Shanghai Urban Neighborhood Survey (SUNS) and Point of Interest
(POI) by Amap, cultural facilities are found to be spatially concentrated in areas with better socioeconomic conditions by using Gaussian-based kernel density estimation, highlighting the existence of spatial inequality in their supply despite the government's efforts to improve citizen's cultural participation and public cultural service resource allocation. Furthermore, the results of the Kruskal-Wallis H Test show statistically significant differences in cultural facility accessibility and visiting frequency among children with parental education and occupation status. In terms of factors related to family culture participation, the results of the multiple linear regression analysis illustrate that the geographic distance is a substantial factor of visiting frequency for parents and children. Meanwhile, parents with higher education or occupation status tend to visit cultural facilities with their children more frequently compared with those with lower education or occupation status. However, results also illustrate that when cultural facilities are adjacent to homes, the gap in visiting frequency between children from families with different socioeconomic statuses is not significant. This underscores the importance of cultural facility accessibility within walking distance or promoting usage and reducing social inequality in low socioeconomic families.

The contributions of this research are twofold. Theoretically, it enriches the literature in both geography and sociology that along with spatial accessibility to cultural facilities, education and occupation are also substantial predictors for increased frequency of attendance, but that association disappear when an adjacent cultural facility exists. Empirically, findings of this study have important policy implications, particularly for Chinese government, which has recently pledged to advance the cultural industry and deliver superior public cultural amenities to enhance the populace's spiritual well-being and improve social equality. This study highlights the need to address the spatial and social inequalities in cultural service provision, providing valuable reference for other cities of China and developing countries.

Citations


Key Words: Spatial accessibility, Cultural amenities, Social inequality, Spatial inequality, Family cultural participation

FUNCTIONAL POSITIONING IN THE PRESERVATION AND RENOVATION OF HISTORIC AREAS: AN ANALYSIS OF CURRENT PRACTICES AND LAWS IN 185 HISTORIC DISTRICTS IN CHINA

Abstract ID: 378
Individual Paper

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The rise of globalization and consumerism has led to the introduction of tourism and office usage to historic areas, with both positive and negative effects. While new uses have reactivated historic areas and enabled economic development, careful consideration is required due to the potential obstacles they have posed to local experiences and cultural preservation.
Therefore, a holistic approach is necessary to reconcile conflicts between preservation and development when implementing functional integration in heritage districts. The study investigated 185 historic districts, which are typical objects of heritage conservation in China, to identify patterns and trends that can inform future heritage preservation strategies. Our research aims to address the following questions: (1) What is the current functional status of historic districts in China? How many categories encompass these districts and to what extent have tourism or office uses been introduced? (2) Are there objective criteria for selecting the suitable use of historic districts, considering the relevance of current and historical uses? (3) What is the impact of new uses infusion on the conservation and regeneration of historic districts?

This study employs a comprehensive approach to analyze the functional characteristics of 185 historic districts in China, utilizing multiple case comparisons and big data spatial quantification techniques to overcome prior research limitations. After reviewing the relevant literature, primary functions were identified, including residential, commercial, cultural and creative, and office. A set of indicators was developed to calculate the functional attributes of each district using POI (point of interest) data from Amap (a Chinese counterpart of Google Maps). Unsupervised clustering techniques were employed to categorize districts according to their functional composition. Following the acquisition of the classification results, a cross-sectional analysis was carried out to investigate the relationship between the current uses and the historical functions. Moreover, five representative cases were selected to examine the correlation between their use types and the effects on conservation and regeneration.

Through statistical analysis of 132,906 data points in 185 districts, the study concludes that Chinese historic districts can be divided into five types based on their uses: residential-led, tourism-commercial-led, tourism-commercial-featured, cultural and creative-featured, and office-featured. Each type has a clear proportion of functional allocation, such as in tourism-commercial-led districts, where the proportion of tourism-commercial use allocation is 70% on average, while the POI of residential and office categories are 9% and 5%, respectively. The classification also reveals that 60% of historic districts have introduced tourism-commercial uses, with tourism development models becoming mainstream in Chinese historic districts.

Further analysis of the linkage between the current and historical uses reveals that while various functional transition is feasible, maintenance and distortion of historical usages remain the predominant factor in determining the current utility of historic districts. Specifically, the majority of tourism-led districts have mixed commercial and residential uses in the past. Few tourist-commercial-led areas used to be purely residential. Besides, a correlation between the urban development level and use transformation shows that integration of office uses often necessitates formidable socio-economic development of the city. Approximately 60% of office-featured historic districts are located in top-tier cities, including Beijing, Shanghai, and Guangzhou.

Representative cases from five major categories, including Chenjia’ong in Jingdezhen, Tunxi Old Street in Huangshan, SanfangQilang in Fuzhou, Xinhepu in Guangzhou, and Dongjiaominxiang Alley in Beijing, are examined to evaluate the effectiveness of conservation and regeneration. The study concludes that appropriate preservation of residential uses is conducive to the conservation of authenticity and traditional culture. Additionally, mixed uses in historic districts can effectively balance conservation and development. The findings underscore the significance of various functional typologies in historic districts, ensuring heritage preservation takes precedence while supporting sustainable socio-economic development.

Citations

A long-standing view in planning practices has been that urban public spaces play an instrumental role in promoting collective efficacy by facilitating social interactions ranging from the ephemeral to the intimate. Repeated contacts at neighborhood-scale public places lay the foundation for the development of social capital and thereby higher level of collective efficacy (Curley, 2010; Jacobs, 1961). However, most existing studies have relied on questionnaire surveys to understand neighborhood social interaction and its effects on collective efficacy (Williams & Hipp, 2019). Yet this method only captures interactions with familiar neighbors rather than the full spectrum of public contact often with strangers, making empirical tests of the mechanism difficult. Recent studies (Browning et al., 2017) have sought to capture public contact through social network analysis of routine activity spaces derived from activity surveys.

This study extends this emerging literature to examine the effects of neighborhood-level public contact potential on neighborhood collective efficacy in a rapidly urbanizing context of Beijing, China. With the economic reform and social transformation, Chinese cities have experienced declined neighborhood social cohesion and collective efficacy since the 1980s (Forrest & Yip, 2007). Using anonymized mobile phone geolocated data over the month of June 2017 by China Unicom, we constructed an actor-location network of routine activity locations of permanent residents for each neighborhood in urban Beijing, which allowed us to generate neighborhood-level indicators of public contact potential. We link this data to a questionnaire survey of 1,280 residents in 26 neighborhoods conducted in April—May, 2017. We adopt multi-level structural equation model to test whether residents are more likely to possess a higher level of neighborhood collective efficacy through the mediating effect of social capital if living in a neighborhood with higher extensity of public contact potential (i.e. a higher share of residents in the neighborhood potentially making public contact), and with higher intensity of public contact potential (i.e. a greater share of residents potentially making contact in multiple public spaces).

Preliminary findings reveal that (1) people living in neighborhoods with higher share of residents in the neighborhood potentially making public contact have higher level of social capital and thereby stronger collective efficacy; (2) however, the effect of public contact in multiple public spaces is not significant on social capital, but negative on residents’ collective efficacy directly.

This research contributes to both the scholarly understanding of the collective efficacy implications of public spaces, as well as the emerging literature on neighborhood collective efficacy in Chinese cities. By focusing on everyday-life contact in public space, this research offers practical implications for planning urban public spaces toward a cohesive urban society.

Citations
Residents’ committees (RCs) are crucial in China’s “dynamic zero-COVID” policy. They were at the frontline of combating the pandemic yet received wide criticism. This is because of their ambivalence between the state and society. RCs are simultaneously perceived as grassroots community organizations and state extensions into urban communities. To further understand RCs’ roles in China’s community governance, this research conceptualizes RCs as street-level bureaucrats (SLBs) capable of exercising discretion and policy entrepreneurship. Instead of a binary characterization, this paper argues that RCs are the “intermediary institutional space” between the state and the society in which policies were delivered, demands were addressed, and conflicts were resolved. Questionnaire surveys and structured interviews were used to examine RCs’ roles and their discretion and policy entrepreneurship during the city-wide lockdown in Shanghai, China, in the Spring of 2022. The underlying ambition is to extract new knowledge on the dynamic state-society relationships in China and the scope of research lands on RCs’ nuanced characteristics between the government and residents.

Results suggest new ways to understand the nuances of China’s community governance. First, before the 2022 Shanghai lockdown, RCs tend to be perceived as the government agency or an intermediary between the government and residents. However, this pattern changed after the 2022 COVID lockdown as more people tend to believe RCs are government agencies due to their strict enforcement of government policies. Meanwhile, compared to residents, RC staff tend to consider themselves as government agents, particularly those with CCP membership. Secondly, although RC staff tend to think of themselves as government representatives implementing policies, they also report the need to represent residents in practice when conflicts arise. But among RC staff themselves, the ones with CCP membership tend to be more confident in resolving conflicts. Thirdly, from the interview results, three major conflicts were identified – compulsory coronavirus testing, emergent access to healthcare resources, and delivery of life sustenance. In coordinating compulsory coronavirus testing, RCs altered the time and frequency to improve policy efficacy and efficiency and to avoid potential conflicts. In addressing residents’ emergent need to visit hospitals and purchase medications, RC staff creatively sourced help from telemedicine to overcome mobility constraints, mobilized volunteers to establish a temporary medication purchasing system, and beckon the policing force to escort residents temporarily. In managing the delay and shortage in delivering food, RC staff utilized their horizontal network to source food outside of the community, organized spontaneous food purchasing, and redistribute food to residents based on household vacancy and the
immediacy of need.

However, functional negligence was a persistent concern among residents, as some RC staff chose to ignore the demands of the residents. Therefore, in either the normal time or during the crisis, instead of granting RCs more autonomy, which was already demonstrated in RCs’ capacity of using discretion and policy entrepreneurship to reconcile conflicts, there is a need to enhance the motivation of RCs to engage in grassroots civil affairs. The emphasis of this paper on China’s state-society relationship thus calls for more attention to the dynamic roles of basic units or jiceng in the bureaucratic logic of China’s post-COVID urban governance.

Citations


Key Words: Community, Residents’ Committee, Street Level Bureaucracy, COVID, China

LOW-INCOME CLASS’S RESIDENTIAL SEGREGATION AND URBAN REDEVELOPMENT PROJECT BETWEEN 2011 AND 2020

Abstract ID: 453
Individual Paper

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In the wake of the economic crisis in late 1990, the gap between low-income and non-low-income groups began to widen. Recently, as the combined earned income of Seoul, Gyeonggi, and Incheon exceeded 60% of Korea’s total earned income, polarization between regions has also emerged. Therefore, a detailed analysis of the residential segregation index between the low-income and non-low-income groups is needed from the perspective that easing the residential segregation of the low-income class can alleviate socio-economic polarization beyond income polarization. This study also asks whether the government’s move to redevelop these underdeveloped areas where low-income people live is further deepening the separation of low-income residences.

This study aims to analyze the time series of changes in the segregation of residences for the low-income class within seven large cities where the past has changed significantly. The analysis range is between 2011 and 2020, and the target areas are Seoul, Busan, Daejeon, Daegu, Gwangju, Incheon, and Ulsan, which are the seven major metropolitan cities representing Korea. The national base living recipient sat as an alternative index for the low-income class. Residential segregation has measured by four indicators: the index of dissimilarity, the index of isolation, the location quotient, and local Moran's I. In addition, using the Propensity Score matching Method is intended to investigate the net effect of redevelopment projects affecting the segregation of residences for low-income families.

As a result of the analysis, it confirms that the segregation of residences of the low-income class has steadily
intensified for ten years in all seven cities, which are case areas. In particular, the dissimilarity index of Seoul is higher than other cities, confirming that the segregation of residences for the low-income class is most severe in Seoul. Also, it shows that Gangnam-gu and Gangseo-gu in Seoul, where the isolation index was high, are severely concentrated. On the whole, as there are few areas with a location quotient index higher than 20, it could be interpreted that there are few places in large cities where low-income families are heavily isolated. However, the local Moran’s I analysis confirmed that an area with a relatively low local Moran’s I index clustered below the Han River. These results show that residential segregation occurred seriously in a similar location, as mentioned in other indices.

Finally, the PSM method is used to investigate the net effect of redevelopment on the low-income residential segregation index. Contrary to the assumption that redeveloping underdeveloped areas would drive low-income people out of their homes and move to other low-income residences, the analysis showed that the redeveloped areas had a 0.4419 decrease in the residential segregation index than non-redeveloped areas. As a result of logging easily, an interesting result obtained that the separation index of low-income dwellings in redevelopment areas decreased by 6.8% compared to non-redevelopment areas. In other words, it confirmed that the segregation of low-income residences is eased by redevelopment.

This study is meaningful in that the spatial structure of poverty, which is difficult to find in residential segregation studies, is identified over ten years using various indicators such as the index of dissimilarity, the index of isolation, the location quotient, and local Moran’s I. Using the PSM analysis method, it revealed that the redevelopment project, which is steadily underway for urban beautification, is also easing the separation of low-income residences, leaving implications for the future direction of urban development projects.

Citations


Key Words: low-income class, residential segregation, inequality

RESIDENTIAL AND WORKPLACE NEIGHBORHOOD ENVIRONMENTS AND LIFE SATISFACTION: EXPLORING CHAIN-MEDITATING EFFECTS OF ACTIVITY AND PLACE SATISFACTION

Abstract ID: 469

Individual Paper

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Enhancing people's life satisfaction is the ultimate goal of efforts to build happy cities. Urban planners thus aim to optimize the environment to improve life satisfaction. However, the association between the environment and life satisfaction still need to be elucidated. In the present study, we enrich the literature by focusing on the effects of both residential and workplace environments on life satisfaction. Moreover, considering the natural, built, and social environments together, we assess the relative importance of perceived environmental quality, accessibility, and social capital in residential and workplace neighborhoods. Furthermore, we reveal new pathways from the environment to life satisfaction by considering the chain-mediation effects of activity satisfaction and place
satisfaction. Based on a sample comprising 1058 respondents in Shanghai in 2018, we apply a structural equation model to identify how natural, built, and social perceived environmental elements in both residential and workplace neighborhoods affect life satisfaction through both activity (commute) satisfaction and place (residence and workplace) satisfaction. The results suggest that the residential environment contributes more to life satisfaction than the workplace environment does. In residential neighborhoods, perceived environmental quality and social capital are important to life satisfaction, while in workplace neighborhoods, perceived accessibility is the most critical element, followed by perceived environmental quality. Moreover, perceived environmental elements can influence life satisfaction by affecting commute satisfaction and residential neighborhood satisfaction and/or workplace neighborhood satisfaction. These findings suggest that planners can promote people’s satisfaction with specific domains and overall life by improving their both residential and workplace environments. These findings suggest that optimizing the environment in both residential and workplace neighborhoods helps improve people’s satisfaction with specific domains and overall life.

Citations


Key Words: Neighborhood design, Workplace environment, Subjective well-being, Happiness, China

DO PLACES WITH STRONGER SOCIAL COHESION REBOUND QUICKER FROM AN ENVIRONMENTAL DISASTER THAN PLACES WITH WEAKER SOCIAL COHESION?

Abstract ID: 473

Individual Paper

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Today, many communities are experiencing environmental disasters due to climate change. Environmental hazards increase acute community vulnerabilities that worsen the effects of these hazards and make the recovery process more complex. However, community resilience can decrease people’s vulnerabilities and improve their capacity to cope with and adapt to environmental hazards. As a collective social resource, it is assumed that social cohesion can positively affect communities’ resilience and ability to recover faster. This exploratory survey research, thus, aims to understand the relationship between social cohesion and community rebounding. Data is gathered using a questionnaire survey and analyzed using the principal component analysis. Case studies are four local communities in Puerto Rico, Corcovada, Cidra, Santo Domingo, and Rucio, affected by many disastrous environmental disruptions. The study results show a positive correlation between social cohesion and community rebounding in the lower rates of recovery rate. However, based on the results, social cohesion cannot necessarily lead to faster community rebounding at higher recovery rates and social cohesion. Therefore, it can be concluded that improving social cohesion might contribute to better community adaptation and recovery in times of environmental disruptions, especially when communities are most in need. The present study highlights the role of social cohesion in the recovery rate and community adaptive capacities and helps policymakers better plan to enhance
community resilience. Policymakers can use the study's results to empower the communities facing environmental disruptions.

Citations


Key Words: Social Cohesion, Community Rebounding, Community Resilience, Disasters, Disaster Recovery Rate

PLANNING OUTSIDE THE BOX: EQUITABLE TRANSIT ORIENTED DEVELOPMENT AND THE PURPLE LINE CORRIDOR COALITION

Abstract ID: 483
Individual Paper

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Whereas the comprehensive plan adopted and periodically revised by local governments remains perhaps the dominant approach to planning for community development, a growing body of scholarship and practice suggests that traditional forms of planning are giving way to new, less formal planning approaches. Hopkins (2001) provides a conceptual framework in which the participants in the planning process, the form and scope of the planning approach, and the horizon and periodicity of the plan should reflect the parameters of what is being planned. Vey and Storring (2022) prescribe a hyper local approach to planning and community development often lead by nonprofit community development and other nongovernmental organizations. And a growing body of literature in the foundation world describes a collective impact approach to planning and community development that includes a variety of government and nongovernmental coalitions (Butterfoss and Kegler 2002, Bryson et al 2015, Brown et al. 2017, Kegler and Swan 2011).

In this paper we describe and analyze the Purple Line Corridor Coalition (PLCC), a coalition of public, private, and not for profit organizations formed in 2013 to promote equitable transit oriented development in the northern suburbs of Washington, DC. Its mission is balancing the benefits of the planned Purple Line light rail project against potential for gentrification and displacement. Specifically, we review the history and performance of the PLCC, identify its strengths and weaknesses, and offer lessons for other coalitions in transit corridors and other contexts. Our analysis is based on structured interviews with coalition members and others about its activities and accomplishments to date. These accomplishments include the drafting of a Purple Line Community Development Agreement signed by two county executives, the President of the University of Maryland, and many others; the creation of active workgroups engaged in small business and affordable housing preservation, workforce development, and creative placemaking. Toward these ends the PLCC has raised nearly ten million dollars from public and private sources.
Our preliminary results suggest that the success of the PLCC reflects many critical aspects identified in previous literature, including its strength of leadership, commonality of goals, trust and comradery, shared governance, and more. Particularly important, according to the interview respondents, was the credibility, analytical capacity, and leadership provided by planning faculty and planning students at the University of Maryland. We conclude with comments on the role of university research centers as participants in community development activities and recommendations for the PLCC and other organizations seeking to promote equitable development through nontraditional planning processes.

Citations


Key Words: Community Development, Transit Oriented Development, Community Coalitions, Structured Interviews, Collective Impact

THREADS OF RESISTANCE AND MAINTENANCE IN THE RIGHT TO THE CITY: REDEVELOPMENT IN RICHMOND VA

Abstract ID: 490
Individual Paper

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The Right to the City framework has been used to understand the ways collective groups demand, operationalize and codify their right to realize a city in their own image (Harvey 2008). This has been applied as a right to exist in public space (Mitchell 2008), a right to housing (Stiphany 2022) the right to remain in community (Howell 2016) or the right to make community decisions about community spaces (Althape & Horak 2023, Gough et al 2022). However, achieving these rights requires significant resistance, coalition building and time. Using the case of redevelopment in Richmond, Virginia over the past four decades, we examine how resistance to top-down decision-making changed approaches to development in Richmond, Virginia. We seek to understand the origins and trajectories of the threads of resistance. More importantly, we investigate how they have intersected, conflicted and co-constituted over the past 40 years.

In February 2020, a proposal for redevelopment in downtown Richmond, Virginia died with a vote of the city council. The Navy Hill proposal, which took the name of a neighborhood destroyed through mid-century urban renewal and highway projects after decades of devaluation, included minimal affordable housing and an 80-block tax increment finance district. It also originated from a closed-door process. Yet, what ultimately led to its demise were several threads of resistance that came together to challenge the Navy Hill proposal, including advocates for cultural heritage preservation, smart growth, housing and public education. While this coalition did not come together until Navy Hill, the individual threads grew and came together through the collective experiences gained from an ultimately failed downtown project in 1980, the multiple efforts to build a ballpark on the sites of slave
trading and bondage in the Shockoe Bottom neighborhood, and the efforts to raze public housing across the city. Moreover, this coalition went on to organize marches to protest police violence, advocate for the removal of confederate monuments and occupy Marcus David Peters Circle, the site of a monument to confederate general Robert E. Lee. Our research finds that with each new iteration of redevelopment, elite power acts to co-opt narratives and make attempts to manipulate local power bases, requiring constant vigilance and burnout of organizers.

This paper examines the roots of these threads of resistance to inequitable development processes and outcomes in Richmond, VA and seeks to understand the ways these different constituencies take and maintain the right to the city. We use extensive archival research, network analysis and key informant interviews to understand goals, process and power of redevelopment. We argue that Richmond was stuck in a pattern of elite driven demolition and redevelopment that facilitated the ongoing displacement of residents and suppression of counter narratives. This case illustrates the need to move beyond the taking and retaking of a right to the city. Indeed, we argue that the ways that the built environment has been made and remade represent the reification of racialized power in Richmond. At the same time, while these threads of resistance represent efforts to challenge that power, the ongoing pattern of redevelopment efforts make it clear the right to the city must be operationalized and continually maintained in order to progress.

Citations


Key Words: Redevelopment, Resistance, Organizing

GENTRIFICATION BY ATTRITION, THE CASE OF PILSEN IN CHICAGO

Abstract ID: 532
Individual Paper

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This paper addresses the displacement by attrition caused by gentrification in the neighborhood of Pilsen in Chicago. Responding to recent literatures that minimize the effect of displacement, we show that they fail to capture the complex process of erosion of incumbent resident institutions, the transformation of community-based organizations from activism to service provision, the aging or disintegration of extended families, and the decomposition of the housing market, among others that lead to displacement. This research is part of a longitudinal study of Pilsen’s immigrant Latino community’s trajectory using grounded critical visualization and mixed-methods and is based on intensive interviews, archives, secondary data, published research, and participant observations. The paper contributes to the literature by nuancing the process of displacement that quantifiers of displacement fail to capture and that we call gentrification by attrition, whilst adding to the literature on resident resistance.
A POLICY WINDOW FOR EQUITY? THE AMERICAN RESCUE PLAN AND LOCAL GOVERNMENT RESPONSE

Abstract ID: 533
Individual Paper

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The disproportionate impact of the COVID-19 pandemic highlighted acute systemic inequalities and the need for social investment. Pressure from community, such as the Black Lives Matter protests, along with expanded federal funding through the American Rescue Plan Act in 2021, created a policy window for local governments to respond. We use case studies to show how local governments incorporated equity into their investments of State and Local Rescue Funds from ARPA. The Treasury rules on ARPA specifically encourage transformative investments that “support long-term growth, opportunity, and equity.” Critical junctures create policy windows where there is a greater chance for an issue to get on a government’s agenda. In these moments, the three independent process streams – problem, policy, and politics – come together to allow for substantial policy changes.

We review three dimensions of equity: distributional, procedural and conceptual, and present an equity framework that connects these three components. We use this framework to analyze case studies from eleven cities and counties to explore how localities used their ARPA funds in innovative ways to expand access to water services, broadband infrastructure, address homelessness, and provide medical debt relief. We explore the multiple mechanisms localities use to build in equity approaches. We find cities used strategic partnerships with community agencies, businesses and higher levels of government to experiment with new initiatives. Our case studies identified the importance of political will and community support. The cases also demonstrated the importance of capacity building and the role of planning. While these cases show how cities lead with action, they also show how values are expressed as justification for the new approach. This illustrates the importance of conceptual, or epistemic equity in subtly advancing progressive action and public policy changes on a larger scale. Many of the local initiatives involved an expansion of the traditional role of government. While equity was often hidden in program design and justification was often economic development based, these investments subtly lay the groundwork for a more equity promoting stance of local government.

Citations


Key Words: COVID-19, Equity, Local Government, American Rescue Plan

MAKING THE INVISIBLE VISIBLE: AN ANALYSIS OF SOCIAL NETWORK CREATION AND USAGE BETWEEN FLORIDA PUBLIC HOUSING UNITS AND LOCAL BUSINESSES BEFORE, DURING, AND AFTER COVID-19 REGULATIONS

Abstract ID: 548
Individual Paper

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Motivation: A public housing tenants’ social network, primarily their opportunity to be exposed to various social groups in the built and social environment, are critical for economic and social mobility (Cahen et al., 2019; Chetty et al., 2022). In previous studies, local businesses have been identified as spaces where various social groups are creating meaningful interactions, creating invented spaces, and a critical component of a community’s culture (Ledesma & Giusti, 2021; Miraftab, 2016). Yet, external shocks, such as the COVID-19 regulations, impact these co-created social networks placing public housing tenants and local businesses as vulnerable and exposed to interrupted social networks. Knowing external shocks increase vulnerability to social and economic mobility, Urban Planners have a responsibility to create policies to protect these social networks.

Safe Graph provides premium global points of interests, foot traffic data, and spatial hierarchy metadata ideal for understanding the social relationships occurring at the grassroots level. Coupled with publicly available housing data from HUD, we have precise spatial locations for public housing units and foot traffic emerging and engaging with local businesses. Incorporating COVID-19 regulations, such as businesses lockdowns and stay-at-home measures, our study is designed to answer:

How has the COVID-19 pandemic impacted the social and economic networks public housing tenants have created through the usage of local businesses?

Methodology: Using 2018-2022 Safe Graph Weekly Patterns – Historic Data and publicly available public housing locations, we set out to:

1. Identify local businesses receiving foot traffic from areas with public housing units versus without public housing units

2. Track foot traffic changes pre, during, and post Covid-19 lockdown regulations.

Task 1: Identify foot traffic between local businesses and public housing units. For this study, for a business to be considered a local business, they must first be identified as ‘local-serving’. Businesses with a 50% volume of foot traffic from individuals within a 10-miles radius will be identified as ‘local-serving’. Once local-serving businesses are identified, we will then identify public housing developments and track foot traffic specifically from these areas to those local serving businesses weekly from 2018-2022 to compare to non-public housing areas.

Task 2: Covid-19 regulations affecting foot traffic. By tracking weekly changes, we track changes occurring while
regulations (business lockdown and stay-at-home policies) are being implemented, the entire duration, and any after effects.

Preliminary Results and Next Steps: All required data has been collected and cleaned to fit the objectives of the study. Next steps are to begin task one by identifying local-serving businesses. By the completion of task 2, we expect to see (1) a decrease, in comparison to non-public housing areas, in foot traffic to local business during and after regulations with some local businesses ceasing to exist illustrating an interrupted network and (2) potential new patterns, or adaptive behaviors, from public housing areas showcasing potential new invented spaces.

The aim of this study is to contribute to the understanding of ‘invented spaces’ in insurgent planning frameworks. The results will illustrate how a spatial analysis can be used to understand insurgent behaviors of invented spaces by focusing on public housing tenants as a marginalized population.

Citations


Key Words: Social Networks, Public Housing, Local Businesses, Insurgent Planning

MEGA-REAL ESTATE SPECULATION AND THE RIGHT TO THE CITY: MIAMI’S LITTLE HAITI

Abstract ID: 570
Individual Paper

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Corporate mega-real estate speculation has gained momentum since the 2008 global financial crisis. Such speculation undermines the physical and social textures of urbanity that potentially enable the right to the city’s material and immaterial realms as a commons. The systemic vulnerabilities of disenfranchised communities enable land speculators and their government allies to conceal the associated violence, damage, and broader costs within discourses of progress for the greater good. Within that framework I explore Little Haiti’s politics of contention and accommodation over the Magic City Innovation District, which despite its hype is no more than a large-scale, mixed-use real estate venture. I ask: How much leverage might a disenfranchised community possess to pursue rights to the city within today’s conjuncture of neoliberal deregulation, financialization, and the entrenchment of corporate real estate capital within the multiscalar machinery of states? What are the implications for whose rights and what rights prevail, the territorial scale of those rights, and how faithful or not the rights may be to the concept’s emancipatory vision? How do those questions pertain to matters of racialized personhood, property, and dispossession?

Citations
IS NONPROFIT SPENDING KEEPING UP WITH THE SUBURBANIZATION OF POVERTY? A CASE STUDY OF THE SAN FRANCISCO BAY AREA

Abstract ID: 578

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The growth of suburban poverty in recent decades has led many metro areas in the US to have a larger share of people experiencing poverty in its suburbs than in its major cities, raising questions about the capacity of the community development (CD) field to provide services to these populations. Nationally, the majority of poor people in large metro areas have lived in suburbs since the mid-2000s (Kneebone and Berube 2013). By the late 2010s, many but not all metro areas saw a majority of their population experiencing poverty living outside of principal cities, with regional variation in the types of suburban jurisdictions that saw growth in poverty (Mattuzzi and Weir 2020). Previous studies have shown that suburban nonprofit capacity, representing investment by the philanthropic and public sectors and making up a large part of the social safety net, has lagged the growth in suburban poverty (Joassart-Marcelli and Wolch 2003; Allard 2017) and that there is variation in nonprofit spending by metro area (Weir and Schirmer 2018). This research seeks to understand the contours of suburban nonprofit capacity through an in-depth study of the San Francisco Bay Area. Interviews conducted with nonprofits and their funders suggest that although there has been some geographic expansion of services in the suburbs, it remains a chicken-and-egg problem: absent funding, it is challenging to expand CD services in the suburbs, yet funders are reluctant to commit funding to areas where there is not yet capacity. An analysis of nonprofit spending via their tax filings will shed light on how the dollar amount of nonprofit spending has changed in non-principal cities and unincorporated areas of the Bay Area in recent years. A scan of nonprofit websites in the sample and/or follow-up calls will help provide a more detailed picture of the geographic reach of nonprofits in suburbs beyond the location of their headquarters on their tax filing, providing context to policy funder discussions about the need for suburban CD capacity expansion.

Citations


Key Words: suburbs, poverty, nonprofits, capacity, safety net

CRISIS AND AGENCY: THE ROLE OF COMMUNITY DEVELOPMENT IN LOCAL ADAPTATION TO CLIMATE CHANGE IN INDIA.

Abstract ID: 638
Individual Paper

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This paper studies the role of community-based organizations in socially equitable local adaptation to climate change in the global south under the conditions of neoliberal environmental governance. Taking a comparative cross-sectoral approach through multi-sited ethnography, this paper examines the institutional conditions under which adapting to decarbonization through nature-based carbon sequestration and clean energy transition result in equitable outcomes in marginalized castes in the Sundarban delta region in India. Climate change adaptation is a federally mandated policy area in India, which is tackled through state and local government organizations. Much of this adaptation work takes place through extensive involvement of civil society organizations, particularly in the low-income, climate-vulnerable communities. This research particularly investigates the role of civil society organizations in mobilizing equitable adaptation and stakeholder buy-in in the communities comprising low-income, formerly untouchable caste groups in the Sundarban delta region. It asks one of the most fundamental questions explored in the planning and policy literature: does a top down or a bottom-up planning approach in climate adaptation result in different justice and uptake outcomes?

With the goal of understanding the ways in which implementation of climate adaptation in India is mediated by civil society organizations, the paper compare two case studies with diverging organizational frameworks for adaptation, wherein, one region pursued a top down policy with state-controlled participation of civil society organizations while the other worked through a closer and more direct involvement of civil society organizations throughout the project implementation and maintenance process. The aim of this research is to assess the extent to which these diverging community-based institutional structures impacted justice and equity outcomes. The first case studies a women’s self-help group engaging in nature-based adaptation activities at Nishchintapur, formed and facilitated by a Kolkata-based NGO called NEWS (Nature Environment Welfare Society). The second case studies a group of “village energy committees” at Sagar block, set up as part of the state government led renewable energy transition projects implemented by WBREDA (West Bengal Renewable Energy Development Agency). This is a strategic comparison due to the similarities between the two cases in terms of governance framework, administrative jurisdiction, similar policy frameworks, shared demographic characteristics and environmental contexts and the proximity of the two sites, which are located thirty miles apart in the delta region.

Preliminary findings show that higher resonance with gender and caste norms correlate with higher participation in local adaptation and increased uptake of state-led adaptation policies in marginalized communities. It also reveals that one the one hand the climate crisis reinforces existing structural inequalities of caste and class, on the other hand, it creates opportunities for subverting existing gender norms to a significant degree. Community based local adaptation provides an opportunity for increased participation of women in community decision making as well as household decision making processes related to financial allocation, investment in health and education.

The contradictions around community development, ownership, and environmental labor distribution are central
to this inquiry. It contributes to existing literature on community-based organizations, political ecology of adaptation, indigenous environmental expertise, the contentious nature of institutionalizing neoliberal environmental governance and state-society relationship in the context of the climate crisis. It extends knowledge on the hybridity of institutional framework in resource management and just transition in a complex planning context such as India. The cases studied here specifically address the issues of understanding adaptation as a phenomenon that cuts across multiple planning and policy sectors such as community development, resource management, energy poverty, water and food security, and transitioning economies. Most importantly, it furthers knowledge on these topics from the perspective of caste categories, a lens less frequently used in conceptualizing environmental justice.

Citations


Key Words: community development, local adaptation, hybrid institutions, gender, India

PUBLIC LIBRARIES FOR DISASTER RESILIENCE: ASSESSING LIBRARIES’ COMMUNITY IMPACTS IN TIMES OF CLIMATE AND SOCIO-ECONOMIC CRISES

Abstract ID: 700
Individual Paper

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In the US, low income and minority communities are vulnerable to compounding social, health, and environmental risks worsened by climate change, economic recessions, and public health crises. Social service agencies and non-profit organizations provide support but can be difficult to find and access. For the unemployed, underemployed, and homeless, securing life-supporting services such as jobs, shelter, food, health, and social services requires information and, increasingly, internet access.

Public libraries offer essential open and free spaces and services to the most vulnerable. Librarians are typically welcoming, non-judgmental, and non-bureaucratic. Public libraries act as de facto disaster recovery centers by serving as cooling and warming centers; providing free computer and internet access; offering personalized help with identifying jobs and preparing job applications; assisting people with finding food and shelter; and helping patrons use e-government websites. Public libraries also fulfill important community place-making roles, serving as providers of curated and trusted information, and as central civic places.

Despite $12 billion invested each year in 15,000 public libraries nationwide, little research has explored their impacts. Gilpin et al. (2021) recently documented the positive impacts of libraries on student achievement and housing values. However, the impacts of libraries on resilience in times of crises, their innovative responses, and
their successes and shortcomings have not been assessed. This is a lost opportunity for scholars and professionals seeking to alleviate climate-related, social, and economic vulnerabilities.

Our research centers around the following question: Given the important role of public libraries as spaces and as service providers, what is their actual impact on the resilience of vulnerable communities?

We focus on public libraries in 13 Midwestern states and use mixed methods to assess the breadth and depth of libraries’ impacts on community resilience. First, we mapped all public libraries in the Midwest and collected community’s socio-economic data and library resources from the Institute for Museum and Library Service for all years between 2010 and 2020. We explored the distribution of libraries and their socio-economic impacts using strategic control groups and quantitative and spatial data analysis. For instance, we find that library closures cause significant declines in local median incomes, controlling for economic trends.

Second, we surveyed 415 library directors across the Midwest to identify their library’s services, focusing particularly on the extent to which they (1) serve as warming/cooling centers during weather extremes, (2) support patrons find jobs and accessing social services, e.g., with resume writing and job application support, support filling in government forms, and (3) responded to COVID-19. We found, for instance: that a majority of libraries provide individualized resume writing and job support, that library directors think that libraries can and should serve as cooling/warming centers (the number of people sheltered varies based on library size, with a large library sheltering more than 100 persons per day during extreme weather events); and that during COVID a majority of libraries provided verified information, served as masks and COVID tests distribution centers, provided curbside pickup and new online services, and added wireless internet access points outside their buildings.

Third, we interviewed 12 library directors about the ways their programs are funded and implemented, barriers they experience, and factors that support their library’s provision of community services. We found a deep ethic of acceptance and care for patrons, and a commitment to being open and serving all persons who walk in the door, including the most disenfranchised populations. Lastly, we explore causal relationships between library presence, budgets, programs and services, and community outcomes in terms of income, unemployment, and COVID mortality.

Citations


Key Words: Resilience, Libraries, Climate extremes, Recessions, COVID

SOCIAL INFRASTRUCTURE FOR THE INTEGRATION OF REFUGEES IN THE COMMUNITY: AN ANALYSIS OF NORTH KOREAN DEFECTORS’ IN-DEPTH INTERVIEW

Abstract ID: 733

Individual Paper
Although the number of refugees is steadily increasing, the problems of their resettling and integration into the local community of the host society remain unsolved. They also have difficulties in their everyday lives on a local level, which makes the issue of their social integration a local level matter (Daley, 2009). Thus, the urban environment, including social, economic, and physical structures in the host society, may play a role in refugees’ adaptation to the community (Bonaiuto et al., 1999). In particular, social infrastructure, which refers to the physical spaces and organizational structures that facilitate social interactions and activities (Latham & Layton, 2022), can be important in the integration of refugees into the community.

North Korean defectors tend to lead a closed life in the early stages of migration due to cultural shocks, difficulties in obtaining life information, limited opportunities for contact with South Koreans, and maladjustment in work life. The approaches to tackling these challenges are expanding from personal empowerment in terms of job, income, and education to the strengthening of the role of social capital. In other words, it becomes important to socially empower them and build their social networks in order to enhance their integration into South Korean society (Chang et al., 2017). This will be influenced by the urban environment, including social infrastructure.

This study aims to examine how refugees adjust to and settle in the new society and how social infrastructure affects refugees’ integration into the local community based on a case study of North Korean defectors in South Korea. For these purposes, in-depth interviews were conducted with North Korean defectors aged 18 or older living in the Seoul metropolitan area, where many North Korean defectors live.

The results suggest that North Korean defectors have a strong sense of belonging and bond to the local community only after they have confidence in economic activities or have a stable job. Thus, personal empowerment is first necessary for the settlement and social integration of North Korean defectors. However, it can also be seen that the regular participation in resident activities, such as volunteer activities, has a positive effect on empowerment by providing information on employment, higher education, and culture. As the experiences of North Korean defectors who settled down stably before have a great effect, it is important to have opportunities to meet them together. The activities that South and North Koreans do together also improve social capital, through which the defectors get a job and understand South Korean culture. All these social interactions are supported and facilitated by physical spaces such as parks or public sports facilities in the region, indicating that it is necessary to develop programs such as resident activities that can form social capital and to plan facilities where residents can interact in daily life.

Citations


Key Words: Social Infrastructure, Refugees, North Korean Defectors, Social Integration, Local Community
Child-friendly cities, as defined by the UN Convention on the Rights of the Child, should fulfill the rights of all children through access to safe environments, basic healthcare and education, green spaces, and opportunities to meet and play with friends. Children’s participation is essential to improve cities that pose multiple risks to children and ensure their sustainability. Recent urban planning discussions have attempted to understand the relationship between children and their surroundings, but it remains unclear whether children can be the main actors in participatory planning. Therefore, we constructed a community participatory planning process (related to school zone road safety) including children as the main planning actors, focusing on what processes and stages children can participate in and how their knowledge and understanding can be meaningful.

In South Korea, the issue of road safety in school zones has been highlighted by major amendments to the Road Traffic Laws following the tragic death of a child in a school zone in 2019, but road safety-related improvements of community spatial structures remain insufficient and traffic accidents leading to children’s deaths are frequent. This study focused on school zones in Busan Metropolitan City, which have high traffic safety risks due to their dense spatial structure and narrow roads.

The planning project was carried out with children in a three-step planning process: field work, solution and location proposals, and construction of the plan. During the participatory planning process, children presented various opinions based on their experiences and selected preferred solutions and locations.

Step 1 consisted of fieldwork and community mapping. After a training workshop by the planner group, the children themselves identified community conditions and problem’s characteristics, and expressed the results of their fieldwork using a map of the entire study site. Step 2 explored alternative solutions to the problems identified during community risk mapping and conducted an online field survey, inviting participants to suggest places where the selected alternatives should be implemented. In Step 3, the planner group organized the previous final community walking safety plan by comprehensively considering the preceding steps.

We organized and applied a participatory planning process with children as the main actors to address road safety problems in the community. The results showed that when children are the main planning actors, planners must create a governance structure that can overcome children’s limited roles as initially defined by their parents. The study also showed that children can contribute effectively in relation to problems directly concerning them. Therefore, planners should move away from the bias that children’s participation in planning is of limited practical value and recognize children as important planning actors and translate the problems of planning into the language of everyday life to match children’s experiences.

During the planning process, children provided meaningful information and ideas related to road safety based on their experiences in the community. They explored key road safety problems and expressed their preferences, which were used to develop the final neighborhood plan. The results showed that children can be important stakeholders in the practical aspects of planning and their experiences and needs constitute important information for planners to solve community problems. To achieve this, planners need to translate community planning problems into language tailored to children’s characteristics. Out proposed model for incorporating children in planning will help planners to work effectively with children.

Citations

**YOUNG SINGLE-HOUSEHOLDS’ LAYERED LOGICS OF "TOGETHER ALONE": A CASE STUDY OF SOCIO-SPATIAL INTERACTIONS IN RESIDENTIAL NEIGHBORHOODS, SEOUL, KOREA**

Abstract ID: 749

Individual Paper

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In the 2023 Census, young single-households in their 20s and 30s have become a major household type, comprising 48.8% of the 36.8% of single-person households in the total population of Seoul, Korea, with a rapid increase expected in future estimates. Young single-person households spend more time alone than other households according to the 2019 Living Time survey, and their isolation has emerged as a new social issue, related to the highest suicidal rate among 20s and 30s. Due to these backgrounds, previous researches have focused on their solitary lifestyle doing daily activities alone, proposing the needs for strong communities in everyday spaces (Noh, 2018; Kim et al., 2022). However, young single-households spend more time living outside homes, and selectively coexist in space with others. And even if they seem to act alone, they often share goods or services with strangers through online platform, utilizing “untact” way (Lee et al., 2014). Although these kinds of manners create weak social connections, they represent multiple layers of logic in young single-households’ socio-spatial spectrum of interactions. Such weak interactions can lead to new opportunities and socioeconomic innovation (Granovetter, 1973). In addition, despite concerns that the digital age harms relationships in physical space (Turkle, 2011), urban space could carry various layers of human relations from strong to weak, fostering new forms of social interaction (Guo et al., 2022; Bravo & Crawford, 2014). Although existing studies provide insights into how young single-households live alone, empirical research is still lacking on their complex “alone together” behaviors within current digital years’ residential neighborhood spaces.

With these backgrounds, this paper addresses the following research questions:

1. What are the main indicators that measure the socio-spatial interactions of young single-households in recent residential neighborhood lives?

2. What could be the logics of analytical framework for many layers of “alone together” interactions?

This paper develops an analyzing framework, “Social behavior-Space Logic”, and conducts an empirical survey along with activity logs of 30 young single-households in the Daehak-dong neighborhood, which has a high concentration of 20s and 30s single-person households in Seoul, comprising 47.9% of the total population (Yoo et al., 2019). Encompassing three categories: behavior-based space theory, social behavior within a space, and functional factors of urban space activity, this paper presents a “Social behavior-Space type” through an algorithm with socio-spatial indicators, whose applicability got tested.

Key Words: participatory planning, child-friendly city, road safety, planning process, community planning
This framework identifies six Social behavior-Space types (A-F) using two by two socio-spatial indicators: “space” and “activity” for objects, and “contact” and “untact” for manners. Type A shares both space and activity face-to-face, Type B shares space and activity in untact manner, Type C shares non face-to-face activity but not space, Type D coexists in space but doesn’t share activity, Type E shares space at different times but not activity, and Type F shares neither space nor activity at any time. Through this framework, besides Type A’s generally accepted strong interaction, this study illuminates how neighborhood spaces can carry diverse behavioral interactions. For example, young single-households most commonly be active alone while physically sharing space (Type D), and during leisure activities, they showed all Social behavior-Space types (A-F), interacting with others non face-to-face (Types B, C). Among the various spatial facilities in the neighborhood, open space and mobility facilities accepted the most diverse spatial social interactions (Types A-F).

This paper highlights the importance of acknowledging diverse layers of socio-spatial interactions in residential neighborhood spaces, while previous studies largely focused on how young single-households live alone. By identifying young single-households’ multi-layered logics of “Together Alone”, this study provides a basis for better understanding, which would lead to more caring and diverse space approaches in neighborhood planning.

Citations

- Turkle, S. (2011). Alone together: Why we expect more from technology and less from each other. In Alone together: Why we expect more from technology and less from each other. Basic Books.

Key Words: Socio-social interaction, Young single-households, Residential neighborhoods, Together alone, Social behavior-Space logic framework

THE LARGE SCALE AFFORDABLE COMMUNITY AND RESIDENTS’ SOCIAL CAPITAL: A CASE OF GUCUN FROM SHANGHAI, CHINA
Abstract ID: 787
Individual Paper

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Since the 1990s, the Chinese government has advocated the construction of the large scale affordable community. It helped citizens improve their living conditions, evacuated the population of the central city, and promoted the construction of new cities in the suburbs, but it also caused various problems in both space and society. This kind of large-scale government-led relocation project has completely changed the living conditions of the inner city residents or villagers. The social network of new residents has been broken, and their personal social capital has been reduced. Residents need to reconstruct social networks in new communities urgently. With the implementation of the 15-minute community living circle plan, the development of urban and rural communities has shifted from traditional reconstruction to organic renewal. Improving community cohesion and realizing residents’ own values have become important goals of community renewal.
Community social capital of residents refers to the resources contained in the social network of residents within the geographical boundary of the community. The community social capital of all residents in a community can reflect the cohesion, sense of belonging, and trust of the community. This study explores the development of large residential communities from the perspective of social capital, focusing on the following three issues: how to measure the community social capital of residents, whether there are differences in the social capital of different communities, and what factors affect these differences.

Among the large-scale communities in Shanghai, Gucun is one of the first large-scale community planning projects. There are four main types of housing: civic relocation housing, peasant relocation housing, affordable housing, and commercial housing. We selected four typical communities to conduct a questionnaire survey, and finally recovered 318 valid questionnaires. Through factor analysis, the 23 questionnaire questions that reflect residents’ social capital in the community can be divided into six dimensions, namely volunteerism, sentiment, association, social network, sociability, and neighborhood relationship. The four types of communities in Gucun have different performances in the six dimensions of social capital, and the value of peasant relocation housing is the highest.

Based on the resident interviews and behavior observation, we found that the community social capital is closely related to the personal attribute characteristics of the residents, and it is also affected by the spatial elements inside and outside the community. The large square in the center of the community is conducive to the construction of residents’ social network. Various types of activity rooms enhance the social participation of residents. The large public space outside the community provides the possibility for residents to accumulate social capital in a larger area.

Citations


Key Words: social capital, community renewal, evaluation, large scale community, affordable housing

ECUADOR’S BUEN VIVIR APPROACH: MEDIATED SPACES FOR COMMUNITY-LED ORGANIZING
Abstract ID: 834
Individual Paper

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Insurgent planners routinely propose and fight for social transformation. What happens, then, when the state adopts these alternative visions and attempts to codify them into planning documents? What dynamics ensue as grassroots groups fight to ensure those visions are meaningfully translated and operationalized? I take up those questions in Ecuador, one of the first national governments to establish a constitution that frames the rights of both its citizens and the environment around holistic well-being (buen vivir). Those constitutional rights draw from Indigenous cosmovisions, often simplified to the Kichwa phrase sumak kawsay. Focusing on the case of Yasuní National Park – a contested site that Indigenous communities and environmentalists have been fighting for over a
decade to protect from oil drilling – my paper builds on planning scholarship related to contested sites, community organizing, and the mediating role of the state. Specifically, I ask: What boundaries, rights, and asymmetrical power relations are created and reproduced in policy and planning documents that incorporate tenets of buen vivir? In what ways do stakeholders leverage those rights and boundaries or work outside of them to bolster or suppress community organizing to end oil drilling in Yasuní National Park?

Existing scholarship on insurgent planning and contested sites analyzes how the state sanctions certain spaces for citizen participation and how insurgent groups strategically engage with those spaces while also creating or re-appropriating new spaces for counter-hegemonic efforts – “invited” vs. “invented” spaces, respectively (Miraftab, 2009). Other work on postcolonial planning settings discusses “mediated contact zones,” illustrating how planning and policy texts create and reproduce boundaries that delineate how stakeholders experience inclusion and exclusion in planning decision-making, creating asymmetrical relations of power (Barry and Porter, 2012; Porter and Barry, 2015). The literature on insurgent planning and mediated contact zones, however, tends to be structured around an undifferentiated binary of the community and the state, raising questions about how community organizers maneuver a complicated set of multi-scalar dynamics to ensure the outcomes they seek.

I employ mixed methods to develop a multi-scaled analysis of the insurgent planning efforts against oil drilling in Yasuní National Park. My study analyzes the boundaries, rights, and relations of power established by planning agencies and policymakers in Ecuador through critical discourse analysis of relevant documents. These documents include Ecuador’s constitution, lawsuits and legal documents, regional and municipal plans, the National Development Plans, National Plans for Buen Vivir, and national referendums related to extractive industry, Indigenous rights, and public participation. I also conduct semi-structured interviews with members of Ecuador’s national legislature, members of Indigenous and environmentalist organizations, Indigenous residents of Yasuní, local and regional planners, university experts, and Ecuador’s ex-Minister for Energy and Mining and ex-President of the Constituent Assembly that drew up the 2008 constitution. I structure this analysis along multiple scales, including the community, municipal, regional, national, and global level.

My findings extend our understanding of insurgent planning and mediated contact zones beyond the local scale and outside of the binary depiction of state/planner vs. community. The case of Yasuní suggests that many local land use and planning issues will involve more complex stakeholder dynamics and multi-scaled strategies to exert community autonomy. My analysis reveals how national- and global-level rights, narratives, and interests work in tandem to overrule local Indigenous rights and environmental protections, even when codified into national plans, laws, and the constitution. My findings also, however, reveal effective tools and strategies that community groups can leverage to push back and eventually make gains. These insights are not only critical to the case of Yasuní National Park, but more broadly for community development that seeks to support more authentic community autonomy.

Citations


Key Words: Community planning, Grassroots organizations, Environmental planning, Extractive industry, Indigenous rights
OVERDUE AND RETURNED: THE STORY OF BOSTON’S CHINATOWN PUBLIC LIBRARY

Abstract ID: 838
Individual Paper

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Public branch libraries play important roles in immigrant communities as assimilation and/or integration centers, gathering places, economic training grounds, sites of activism, and locations of ethnic identity assertion and memorialization. The histories of branch libraries are stories about the development of the neighbourhoods they serve, the preservation of culture and identity, as well as the growth of coalitions and divisions. When branch libraries are under-funded or even missing from immigrant neighborhoods, how do residents fill in the gap? And what does this mean for the practice of community development in ethnic enclaves struggling to memorialize their histories and defend territory in the city?

This research focuses on answering these questions through the case of the Chinatown Branch of the Boston Public Library (BPL). Through archival research, media analysis, and interviews, this project documented the 150-year history of a grassroots movement for a branch library in Boston’s Chinatown. At first, the addition or removal of the library in Chinatown was largely an extension of city policy intended to Americanize immigrants, and eventually the presence of a library in the neighborhood became an extension of grassroots community movements aimed at preserving cultural heritage. The once-transient branch finally became official in 2018. Two important and paradoxical mechanisms led to the permanence of this hyperlocal institution: 1) the organizing of Chinatown youth who wanted to stay connected to their heritage in the rapidly changing neighborhood as well as 2) the resources of new residents who were unintentionally gentrifying the neighborhood. This historical analysis demonstrates that branch libraries serve as critical spaces of memory and local knowledge for immigrant populations whose histories are often erased in the city.

Citations


Key Words: Chinatown, library, youth, gentrification, social mobilization

DEVELOPING COMMUNITY IN THIRD SECTOR SPACES: A PURVIEW OF INDIGENOUS PACIFIC ISLANDER NONPROFITS IN SOUTHERN CALIFORNIA

Abstract ID: 871
Individual Paper

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The organizational infrastructure of civil society, the nonprofit sector now more than ever fills the gaps not provided by the market or state, and urban planning is largely a state actor. Especially as it concerns communities in and on the margins, community-based faith-based nonprofit organizations and institutions deliver services and create and develop economic and social support networks. I study third sector civil society in southern California focused on indigenous Pacific Islander communities. What socio-spatial structures and interactions exist within the
third sector to deliver services and develop indigenous Pacific Islander communities? How are services triangulated among community-based faith-based and state entities? Interviews with community leaders and nonprofits serving Pacific Islanders were conducted. Local third sector organizations and institutions that service indigenous Pacific Islander communities are a central part of community building and empowerment strategies. In addition to economic and social support services, these entities provide the space and place for indigenous communities to practice culture and language in a political atmosphere of racial animus and polarization.

Citations


Key Words: community development, Pacific Islanders, social services

ENVISIONING AFROFUTURITY: REIMAGINING THE BLACK URBAN FUTURE THROUGH EMANCIPATORY COMMUNITY VISIONING AND SOCIAL JUSTICE AUGMENTED REALITY

Abstract ID: 910
Individual Paper

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Through a partnership between the UW Tacoma School of Urban Studies (SUS), and UW Seattle Department of Human Centered Design (HCDE), implemented in the summer and fall of 2023 this project developed and emplaced novel quantitative and qualitative tools and frameworks to amplify local voices and visions, as acts of resilience in order to preserve existing community social, physical, economic capital while reimagining alternative Black urban futures situated within the emancipatory tenets embedded Afrofuturist praxis. This research occurred in the city of Tacoma, WA where Black Tacomans are at a unique juncture of urban contestations in which they are situated between decades of community socioeconomic disinvestment, and the rapid gentrification and displacement of long-term residents.

This project was undertaken to create novel alternatives to community development and visioning through layering critical urban theories and frames, emancipatory community development praxis and visioning, with social justice oriented augmented reality (AR) to reimagine the possibilities of urbanity in the 21st century for Black Tacomans. To date, this project has create novel products and scholarship including: a sustainable AR community toolkit, a case study of emancipatory community development praxis, and a curriculum guide for both undergraduate and graduate community-engagement with peer-reviewed publications in the fields of urban studies, community development HCD, and community-engaged pedagogy being crafted.

The Racialized Palimpsest City, as a theoretical and analytical frame, serves as both the site and source of the contemporary lived experiences of Black Tacoma residents in contestation of urban place and contemporary anti-displacement. Translating theory to praxis, to move beyond the historically rooted, the first aspect of this project
was to co-lead the community members through a novel emancipatory community visioning praxis developed which created collective imaginary urban spaces outside of historical and contemporary subjugation, dislocation and harm. Through this process, the community identified critical projects, discourses, and visions to collectively undertake.

Iterating on the foundational research that originated RPC, this second component of the proposed project layered social justice oriented augmented reality, to analyze community-based discourse and action within RPC’s framework. As an intervention, AR is a unique technological method for praxis tied to urban spaces as it relies on the environment’s physical assets. AR couples computing devices (e.g. smartphones) to detect and augment urban infrastructure like buildings, pathways, and signage; and even its inhabitants such as humans, animals, and plants. In facilitating the design and deployment of digital assets to augment what people hear and see around the Hilltop neighborhood, these AR experiences can modulate people’s perception of the urban environment according to its community-centered discourse.

Citations

- n/a

Key Words: Community Visioning, Afrofuturism, Augmented Reality, Black Urbanity, Community engaged pedagogy

MIGRANTS’ EXPERIENCES ACCESSING INFORMAL RENTAL HOUSING IN SANTIAGO, CHILE.

Abstract ID: 943

Individual Paper

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In the last decade, migration movements have been happening worldwide, with international migrations in 2019 3.5 times that of 1970 (Obeng-Odoom, 2021). Accordingly, to the International Organization for Migration, there are more than 1 billion migrants today (IOM, 2020). Latin America has also been part of this global phenomenon, particularly through increased intraregional migration. Chile has become an economically attractive destination to arrive in since the 90s; however, the last rapid increase in migration movements has brought significant challenges to Chilean cities. The national estimation showed that international migration represented 7.5% of the population, the majority coming from Venezuela (30,7%), Perú (16,3%), and Haiti (12,5%) (INE, 2020), and 61,9% of the total migrant population located in Santiago (INE, 2020). Migrants in Santiago are challenged to access the formal rental housing market, which can be limited due to migratory status and economic documentation. In this sense, their option is to look for informal ways of accessing a housing solution. Many go to old houses or warehouses in central areas transformed into narrow dorms called “nuevos conventillos” (Edwards & Greene, 2020). Other migrants, due to the precarity of the informal rental market and difficulties accessing the formal market (requirements and prices), look for alternatives in the informal settlements (Campamentos). Between the informal settlements in the city’s peripheral areas and the downtown areas of Santiago are innerburbs neighborhoods (Ward et al., 2015). These neighborhoods were massively formed by the Chilean housing policy as an alternative for low-income families since 1960 through the Operación Sitio policy and also as part of the eradication and resettlements program during the dictatorship between 1979-1985 (Ward et al., 2015), forming the “first suburbs” of the city.

In this sense, little has been discussed looking at migrants housing access to innerburbs districts of the city, where traditional Chilean low-middle income families are located. These neighborhoods have consolidated urban and
social structures, and most dwellings have expanded since the original self-built dwelling in the mid-60s (Ward et al., 2015). Moreover, as Margarit et al. (2022) study showed, migrants present in the semi-peripheral districts have increased within the last couple of years. This paper explores and discusses the experience of migrants accessing the informal rental market in the semi-peripheral areas of Santiago, Chile. The methodology consists of a mix-method approach. First, by showing descriptive data on migration location, composition, nationality, and renters rates using the National Socioeconomic Characterization Survey (CASEN) 2020. Secondly, by analyzing the available supply of informal rental units on digital platforms commonly posted in social media, such as Facebook Marketplace and Yapo, in three innerburbs districts of Santiago. Thirdly, by conducting semi-structured interviews with migrant tenants and key actors involved in the process of the informal rental market. This article shows the constraints for migrants to access the rental market. Additionally, this article argues that informal rental housing allows many migrants to access networks and services in well-located areas, having direct contact of cohabitation with Chilean inhabitants. However, the typologies are characterized by precarious and overcrowding conditions.

Citations


Key Words: Migrants, Informal rental market, Latin America

SOLIDARITY WITH MIGRANTS: SIMULTANEOUS STRUGGLES FOR THE COMMONS AND BEING-IN-COMMON

Abstract ID: 997
Individual Paper

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This paper follows a research started as my Ph.D. dissertation titled 'Refugee, Agency, City,' which grew out of an ethnography conducted in Milan, Italy, motivated by a search for collective claim making projects of refugees in the years following Europe's 2015 so-called refugee crisis. The research intersects critical governance theories, social movements scholarship, and critical migration studies.

The research, in the broad sense, examines the capabilities, limits, and potentials of self-organizing projects of migrants and solidarity groups by situating them within refugee governance through developing a relational ontology and a multi-scalar methodology. By deploying a Gramscian interpretation of governance, I turn the attention to the multiple types of governance at work by multiple actors which are dialectically building the panorama of urban refugee governance. In refugee governance, the states, including the national, subnational, and supranational ones, deploy multiple types of governance confronting different groups of the population for differentially governing them with different mixtures of coercive and hegemonic power, which together try to govern the society as a whole. Simultaneously, there are other actors, including social movements and other bodies of civil society, who are trying to organize against the violent state power, with a diversity of tactics from contentious politics and as a counter-hegemonic force towards the state and its institutions, to alliances with other bodies of civil society, to building communities together with migrants through affective trust and by prefiguring the social relations they aspire to in order to respond to the very material needs, such as housing, as well as building social relations as antidotes to deprivation, expropriation, and accumulation by dispossession.

In this paper, I focus on the practices of solidarity by urban social movements and associations, and the projects
consequently shaped through the encounters between migrants and those solidarity groups. These solidarity projects organized around principles and practices such as migrants’ protagonism, mutual aid, welfare from below, and claims for the commons, strove to put solidarity against structural racism, racial capitalist exploitation, colonial legacy, methodological nationalism, and the governance of refugees in keywords of crisis, humanitarianism, and assistentialism. These solidarities in the encounters with migrants were being incarnated into the materiality of projects of claim-making around issues such as housing, claiming asylum seekers’ rights in refugee camps, claiming regular jobs, and social recognition.

I examine the relations between the city, social movements, migrants, and the commons. I look at the challenges of solidarity and building social relationships which seek to act against the asymmetric racialized relations and dynamics of marginalization, while situated within those dynamics. Theoretically, I refer to scholarships that consider acts of resistance and building thriving communities as simultaneous necessities, such as Cornells' oppose and propose (2011) and Holloway's 'against-and-beyond' (2002). I call it simultaneous struggles for 'the commons and being-in-common'; with the former, I refer to the practices of those groups in making claims to urban commons constituted by practices of resistance and alternative forms of resilience (Kousis, 2017; Tsavdaroglou, 2016) to create what is referred to as 'anti-capitalist commons' (Caffentzis & Federici, 2014), and 'commoning-beyond-capital' (De Angelis & Harvie, 2014) as a part of their external struggles in various contentious ways. With the latter, I refer to their internal dynamics and their attempts to build communities and prefiguring ways of life against racial logics that structure processes of "primitive" accumulation and expropriation (Fraser, 2016; Singh, 2016; Issar, 2021; Launius & Boyce, 2021); in this, I look at these efforts on building communities based on the ethos of mutual aid as the work of social reproduction through commoning practices (Peake et al., 2021).

Citations


Key Words: The Commons, Social Reproduction, Urban Social Movements, Solidarity, Migration Governance

LOCATING LESBIAN LIVES: NEIGHBORHOODS OF FEAR AND TRUST ACROSS THE LIFESPAN

Abstract ID: 1001
Individual Paper

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Aging-in-place is a widely shared goal among older adults in the United States, but the literature remains largely heteronormative and androcentric (Turesky, 2022). This study addresses the catalysts and consequences of aging-in-place among lesbians in Los Angeles. By applying a queer-feminist lens (Gorman-Murray, 2008, Isoke, 2011) to frameworks for aging-in-place (Bigonnesse & Chaudhury, 2020), this paper argues that older lesbians' social and built environments influence their attachments to their urban neighborhoods.

With 29 oral histories of lesbians aged 65 to 85 in Los Angeles County, I examine the different ways in which older lesbians use their neighborhoods to find care and connection amid heteronormative social networks and spaces. In particular, I ask: does aging shape lesbians’ sense of fear in their neighborhood environments, and vice-versa?
Does lesbian identity affect their perception of the neighborhood environment? If so, how? Finally, how can planning and policymakers support lesbians as they age? Findings suggest that location, neighbors, caring, and cumulative (dis)advantage are key determinants for whether participants fear or trust the neighborhoods in which they seek to stay.

This paper contributes to urban planning research that (a) addresses aging-in-place dynamics (b) deepens our understanding of care practices and spatial justice and (c) advances the liberation of a heterogeneous LGBTQ+ community. By highlighting lesbians’ relationships with neighborhood environments as they age, planners and policymakers can better understand infrastructures of care and connection in the face of ageism and hetero-patriarchy. These spatial oral histories demonstrate how neighborhoods, institutions, and cities can enhance access to spaces and services that would improve the safety and health of LGBTQ+ communities.

Citations


Key Words: aging, neighborhoods, lesbians, caring, fear

COMBATING VS. CONVERTING: NEIGHBORHOOD ACCEPTANCE FOR CONTROVERSIAL SOCIAL SERVICES
Abstract ID: 1005
Individual Paper

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Canadian cities are in various stages of considering the expansion of legal supervised drug consumption sites and overdose prevention sites (OPS). Even with several successes, OPSs remain some of the most contested social services even amidst declared public health emergencies. Every harm reduction site is the product of a massive amount of labor from activists fighting a tide of opposition. The problem, then, becomes understanding how city planners can/should open these physical sites in neighborhoods where NIMBYism (not in my backyard) has become a political rallying cry. This paper examines the potential learned lessons on how to deal with the neoliberal structures like the dominance of property values and development over social services to create future harm reduction sites.

To do so, it uses semi-structured interviews (10) and group panel discussions (4) about OPSs implementations in the city of Vancouver, engaging with individuals and community groups involved in either opening or opposing sites since the 2016 Canadian Federal Exemption in the Controlled Drugs and Substances Act was mandated, including planners, councillors, site staff, activists and neighborhood opposition groups. This paper sets out these controversial sites on a scale of neighborhood acceptance from implementation to their future renewal potential. There are two main ways municipalities can open OPSs in opposing neighbourhoods: (P1) a public outreach approach and convert the neighbourhood to an accepting position and (P2) a public health top-down approach and combat neighbourhood opposition. It should be the municipality’s goal to open the site and keep it open past government transitions. To do so, the majority of the site neighbourhood needs to be in an accepting position (P1).
The accepting position is where the public understands and supports harm reduction, rather than abstinence-based programs, and aligns more with recovery-based programs that are rooted in harm reduction rather than abstinence. OPSs can be opened while the neighborhood is in a neutral/opposing position, but it will be done through combative, urgent, and autocratic means (P2). These are opened faster than P1, ultimately meaning more lives can be saved, but these sites cause backlash and often have large social media and news campaigns against them, even after opening, threatening their permanence and keeping them at risk of non-renewals. Finally, this paper recommends the need for municipalities to partner with activists and bring supportive community groups and businesses to the table by showcasing smaller successful projects to the public ie: public washroom programs or needle exchanges. Other elements like the physical aesthetic of the site can help the neighbourhood transition to a more accepting position.

Citations


Key Words: Social services, Policy, Participation, Neighborhood engagement, harm reduction

COALITION AGAINST POLICE ABUSE AND THE STRUGGLE AGAINST CARCERAL COMMUNITY DEVELOPMENT
Abstract ID: 1009
Individual Paper

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This paper examines the intersections between carcerality, community development, and urban planning. I investigate the ways in which community policing initiatives in South Los Angeles intertwined policing and community development activities, and I interrogate how the conflation of the two manifest as a new mode of urban governance: carceral community development. In doing so I analyze the growth of the carceral state and the ways in which communities struggled against it, specifically through the lens of planning and community development. Planning and community development literatures have undertheorized the state and the ways in which the state (re)inscribes racial capitalism within its planning and policymaking for urban (and global) issues (Harvey, 2013; Miraftab, 2009). In doing so, community-based organizations are limited in the ways they engage with the planning process and the local state, restricting an analysis of how planners inside and outside of the state can support marginalized communities to achieve progressive reforms (Forester, 1993). We are thus left with ways in which the planning state works alongside the racial capitalist and carceral state and lack a theory which takes seriously planning and community developments intersection(s) with the carceral state, and its ability to challenge such solutions.

However, working-class struggle becomes important for thinking about the ways in which communities plan and construct a prefigurative politics of liberation and freedom. This includes reconceptualizing how building community infrastructures can challenge specific ways of being, knowledge, and power, as well as how this
intersects with landscapes of uneven development and the growth of the carceral state (Cowen, 2020; Fanon, 1968).

Utilizing qualitative and archival methods, my case analyzes the Coalition Against Police Abuse (CAPA) in Los Angeles, as they create an anti-policing infrastructure that aims towards building community and resisting criminalization and state violence towards their community members. Through analyzing CAPA, I engage with questions around how community development is understood both intersecting with the state and beyond. Their organic form of community economic development challenges the hegemony of the carceral community development model by exposing violent carceral practices and struggling around community-based solutions and material changes for the neighborhood not tied to the police. I analyze how these responses function as efforts to challenge carceral community development and re-frame community development through a framework of radical self-determination. CAPA played a key infrastructural role in linking together disparate communities, while creating and changing space (and spatial relations) in South Los Angeles. Through analyzing CAPA, we can gain an understanding of both praxis and planning against the carceral landscape and understand the ways in which the creation of an anti-policing infrastructure was embedded in a larger movement for socio-spatial justice. CAPA became insurgent community developers who strategically brought material and affective changes for the people by creating an anti-policing infrastructure.

This paper makes contribution to the planning literatures by highlighting the need for a fuller theorization of planning and community development as it intersects with the carceral state, as well as the ways in which planners can work with community-based organizations to help marginalized communities achieve progressive reforms even within the structural constraints of the state. In doing so, planners must also understand the ways in which communities themselves are already planning and analyzing the spaces in which they live and take seriously the ways in which people live in structured spaces. Doing so, also means interrogating the racial capitalist state, and the ways that it reinscribes a dominant logic through the planning process. By interrogating these intersections, I aim to understand our ability to support marginalized communities analyze, strategize, and struggle for a just city.

Citations

- Harvey D. (2013). Rebel cities : from the right to the city to the urban revolution. Verso.

Key Words: Carcerality, Community Development, Insurgent Planning, Racial Capitalism, the State

THE QUEST FOR GROWTH TO ADDRESS THE HOUSING CRISIS IN GATEWAY COMMUNITIES COMMUNITY LESSONS FROM GLOUCESTER, MASSACHUSETTS

Abstract ID: 1066

Individual Paper

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The Black radical tradition (Robinson, 2000) has recently re-energized the urban geography and planning debates, pushing for antiracist spatial practices. Along these lines, Roy suggests stepping away from displacement and gentrification jargon and switching attention to processes of dispossession to reconceptualize ontologies and epistemologies of resistance (Roy, 2019). This conceptual framework helps investigate how state power and
planning practices can be instrumentally used to dispossess specific bodies of their place, identity, inner-self feelings, and emotions.

In this paper, I explore the nature of state power and planning practices designed to face the housing crisis. I critically analyze the proposed implementation of MBTA (Massachusetts Bay Transportation Authority) communities in gateway cities. Fifty-two municipalities in Massachusetts are currently subjected to the 2021 State Legislator requiring the establishment of zoning districts within a half mile of the transit station to include multifamily residential construction.

While facing a top-down planning decision, community reactions in those municipalities have been mixed. I analyze the case of Gloucester, a historical gateway community of the Massachusetts North Shore, where the imposed State Legislature to implement an MBTA Community has faced strong opposition. In particular, while many feel the need to expand the housing stock for the most disadvantaged, many others think that state planning does not offer concrete solutions to address the housing crisis. I draw from in-depth interviews, community engagement activities, and engaged learning pedagogy experiments designed as part of an ongoing research process to show how individuals and social groups perceive and resist similar initiatives.

Stepping away from mainstream housing gentrification conceptualizations, I draw from Davidoffs’ work to probe the intentional use of planning against specific communities through the use of de jure and de facto discriminatory practices (Davidoff & Davidoff, 1970). I argue that housing planning uses implementation tools to determine the segregation of certain racialized bodies over others while maintaining a growth paradigm that does not address low-income housing needs. Contrary, it favors the housing accommodation of certain social groups while disregarding others. The paper suggests counteractive, normative horizons of work rooted in the increasingly eclipsed US progressive planning tradition (Angotti, 2011), which has historically combined forms of libertarian pedagogy, social mobilization, and the construction of alternative epistemologies to shape intentional and collective actions for empowerment.

Citations


Key Words: Antiracist Planning, Empowerment Planning, Massachusetts

“THE HOOD IS NOT FOR SALE:” COLLECTIVE IDENTITY AND HOOD SOLIDARITY IN THE GENTRIFICATION DEBATE IN THE BOYLE HEIGHTS NEIGHBORHOOD OF LOS ANGELES AND BEYOND

Abstract ID: 1086

Individual Paper

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In 2016, amidst intensifying inequality and visibly unfolding gentrification in the Los Angeles working-class immigrant barrio of Boyle Heights, a Latinx-led militant grassroots coalition emerged calling themselves Defend Boyle Heights (DBH). Until their dissolution in 2020, DBH fought gentrification by subverting formal politics and rejecting associations with prominent nonprofit organizations advocating to shape neighborhood development at the time. Although organizing with far less institutional resources than their nonprofit counterparts and placing themselves in direct conflict with state actors, DBH successfully launched a grassroots-led movement in Boyle Heights.
Heights that stood decisively against gentrification, rejecting the highly unequal status quo of urban development, and celebrating popular resistance against displacement. DBH positioned themselves on the front lines to defend the neighborhood from the most immediate threats of gentrification while cultivating anti-gentrification efforts throughout Los Angeles and other gentrifying cities across the country.

Using the case of DBH, this paper investigates the mechanisms through which autonomous grassroots organizations from historically marginalized neighborhoods forge a distinct analysis of our increasingly unequal urban landscape and build resistance movements that both speak to and transcend their local contexts. Some planning scholars have long puzzled over the marginalization of communities and their respective ontologies from the planning and community development process broadly (Beard 2003; Sandercock, 1998; Miraftab, 2009, 2016), while others have highlighted the structural conditions that uplift certain voices and strategies within such communities as they alienate others in the struggle for incorporation (DeFilippis, Fisher, & Shragge, 2010; Laskey & Nicholls, 2019). However, less explored are the ways in which autonomous groups build local movements that simultaneously break away from dominant community development strategies to forge their own outside of the planning establishment while extending their movement-building efforts beyond the spatial boundaries in which they begin. For this, I turn to social movement scholars who point to the critical nature of cultural and symbolic resources that grassroots groups rely on to generate distinct counter narratives and strategies of resistance (Lamont & Molnár, 2002; Polletta & Jasper, 2001; Snow & Benford, 1992). Not only do grassroots subversive efforts persist and contribute to broader movements across scales (Nicholls & Uitermark, 2006) but they offer critical understandings of place that also speak to communities across geographies (Martin 2003a, 2003b; Massey, 2008).

I draw from a discourse and media analysis of social media content published by DBH and twenty-three in-depth interviews with DBH organizers to examine the discursive and symbolic resources DBH relied on to build an anti-gentrification movement in Boyle Heights and beyond. I argue that the coalition relied heavily on such resources to develop a salient collective identity and praxis rooted in self-determination and a dual sense of place or, what they referred to as, hood solidarity. Hood solidarity formed the foundation of their anti-gentrification strategy as it structured their interpretation of the imminent threat of gentrification, sustained ongoing campaigns of high-risk direct action, and enabled them to communicate their shared meanings through activist networks within and outside of the neighborhood.

Citations


Key Words: Community Development, Grassroots Activism, Social Movements, Gentrification

MAKE WAY FOR FAMILIES: HOW GENTRIFICATION SHAPES SOCIAL SERVICES FOR OLDER ADULTS

Abstract ID: 1118
Individual Paper

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Social service agencies play an important role in the lives of low-income, older adults of color, especially in gentrifying neighborhoods. Gentrification, however, can exert pressures on both older adults and social service agencies that can lead to a mismatch in services. Older adults often become geographically restricted and more reliant on local services as they age, even as cultural and political displacement can lead older adults of color to feel less welcome in the public spaces and local institutions on which they rely. Meanwhile, the social service agencies that provide critical resources for older adults face various pressures related to gentrification that can lead them to deprioritize their older adult programs.

This research asks how social service agencies adapt services for older adults of color while navigating the evolving needs and demands of a changing local community. Using a gentrifying neighborhood of Boston, Massachusetts, as a case study, I address the following research questions: what challenges do social service agencies face in targeting services to older adults when the neighborhood in which they are located gentrifies? How do social service agencies adapt services for older adults in response to social, economic, and political pressures tied to gentrification? What are the implications of these adaptations for older adults of color aging in place? The findings reveal that social service agencies located in gentrifying neighborhoods must navigate a variety of pressures that come from new residents, longtime residents, the real estate market, local government, and funders. These lead to changes in mission, services, and target population, as well as physical displacement. This research builds on scholarship about gentrification and its impact on older adults, populations of color, and community-based organizations.

Citations


Key Words: Gentrification, social services, older adults, community-based organizations

**SHARING THE SINGLE-FAMILY HOUSING CITY: INFORMAL SUBDIVISIONS IN AN IMMIGRANT LOS ANGELES NEIGHBORHOOD**

Abstract ID: 1120

Individual Paper

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While cities are typically associated with dense housing and mixed land uses, planners zone most of the residential land in US cities for single-family housing (Hirt 2014; Mukhija, 2022). For example, in the city of Los Angeles, about three-quarters of the city’s residentially zoned land is reserved for single-family housing (Badger and Bui 2019). Many residents, including working-class immigrants, have embraced and transformed the American Dream of single-family housing by adding unpermitted or informal accessory housing units on their single-family-zoned lots (Mukhija 2014). In this paper, we focus on Pacoima, a working-class neighborhood of mostly Latinx residents with predominantly single-family zoning in the northeast of Los Angeles’s San Fernando Valley, to examine the
prevalence and spatial pattern of informal housing additions and conversions. We ask how common unpermitted second units in Pacoima are and how they are organized on the community’s single-family-zoned lots.

To answer our question, we draw on fieldwork and surveys-based research our graduate students conducted at UCLA in collaboration with Pacoima Beautiful, a well-regarded community-based organization (CBO) active in Pacoima and its adjacent communities. In 2018-2019 and 2020-2021, we structured our graduate students’ group capstone projects to provide research for the CBO’s efforts to bring green infrastructure investments to its community while avoiding the displacement of its working-class, largely Latinx, community members.

First, we find that informal accessory units are widespread in Pacoima, and almost half the lots have unpermitted second units, while several have additional informal housing units. Their prevalence suggests that informal second units are more common in Pacoima than in other parts of Los Angeles. Second, as in other neighborhoods of the city, one-story second units in the back yard, which are not easily visible from the street, are the most common typology and account for almost two-thirds of the informal housing units. Third, we find that the multiple households on the single-family lots rarely share their common spaces. On the contrary, the residents have subdivided their lots into privatized informal subdivisions through fences, parking spaces, and parked cars. We elaborate on how these findings depart from conventional wisdom and discuss their implications for planning, including the limitations of current policy approaches.

Citations


Key Words: Informal housing, Accessory Dwelling Unit (ADU), Single-family zoning, Pacoima

A STUDY ON THE FACTORS AFFECTING THE CREATING OF A CHILD-FRIENDLY SMART CITY IN SEOUL: FOCUSING ON CHILDREN’S RIGHT TO PLAY

Abstract ID: 1190
Individual Paper

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For children, play is not only a necessary condition for physical and mental health and healthy development, but also a basic welfare right that children should enjoy as a matter of course. In addition, the importance of play activities has been emphasized as children can learn interaction and social skills through face-to-face play activities and go through the process of transitioning from care to education. However, the high cost of using private play facilities and the selection of market-friendly locations can lead to marginalization based on residence and income.

This study focuses on the following two items in Seoul’s ‘dense child household areas’ where many child households live. First, we examine the spatial distribution of child-headed neighborhoods in Seoul and derive the socio-spatial characteristics of each neighborhood. Second, we examine the changes in the distribution of
children's playgrounds by administrative district and identify factors that affect the spatial distribution of indoor playgrounds.

Multiple regression analysis was used to analyze the influencing factors of the spatial distribution of indoor play facilities using the Seoul Si-dong Household Housing Survey conducted in Seoul in 2020 and open API data from the Ministry of the Interior and Safety's National Children's Play Facilities Information Service. 2020 is set as the temporal scope, and 425 administrative districts of Seoul are set as the spatial scope. The research subjects are children aged 0 to 9 years old living in Seoul.

The results of the study showed that playgrounds are concentrated in areas with a higher percentage of offices, a higher percentage of female workers, and a higher density of children. The study suggests that locating facilities in areas with a large number of facility users is a reasonable land use method, but it is necessary to plan for the location of facilities in consideration of the special characteristics of the study population, which is that they are usually accompanied by their parents and have short travel distances, and it is significant to suggest policy implications for the role of the public in considering the quality of life of marginalized children based on their residence and income.

Citations


Key Words: Children’s play facility, Quality of life, Child welfare

RESPONSE TO SHRINKING CITIES: CULTURAL URBAN REGENERATION

Abstract ID: 1212
Individual Paper

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[Problems] Between 1950 and 2000, more than 350 of the world's cities experienced severe population decline, especially in older industrial cities. As a result, the discourse of Shrinking City has been created worldwide, and South Korea is introducing a strategy to revitalize Shrinking Cities through urban regeneration in declining areas. In previous studies, it was found that cultural infrastructure has a significant effect on population composition and increase in cultural related industries. Therefore, this study analyzed how the cultural urban regeneration project, which created cultural infrastructure through the urban regeneration project, affects the declining city.

[Research Methodology] The study area of this paper covers Busan in South Korea. Busan is the second largest city in South Korea, and it was used as the refugee capital during the Korean War in the 1950s and grew rapidly. This study were set as treated groups that three types of general urban regeneration projects and a cultural urban regeneration projects. And set as control groups that 35 declining areas with declining populations and businesses and lots of old buildings. Next, we analyzed the cultural effects of urban regeneration projects by type through DID.
[Findings] As a result of the analysis, it was found that urban regeneration projects, easing population decline, and increasing the ratio of the working age population had a positive correlation. In particular, it was found to have more effects on cultural urban regeneration. Rather, it was found that urban regeneration projects and the number of social welfare businesses/workers had a negative correlation.

[Conclusion and Discussion] Three implications can be derived from the analysis results of this study. First, urban regeneration projects mitigate the trend of population decline in the region, and have a significant impact on the increase in the proportion of the productive population and the increase in the number of cultural related businesses/workers. Second, cultural urban regeneration projects have a higher effect on population and cultural factors than general urban regeneration projects. Third, in South Korea, cultural urban regeneration projects tend to be carried out by the private sector, but more public led cultural urban regeneration projects should occur through policy improvement in the future.

This study has limitations in that it limited the scope of the study to Busan. It also did not include local economic and income data due to the limitations of data acquisition. Further research in the future will be able to discover the effects of cultural urban regeneration.

Citations


Key Words: Cultural Urban Regeneration, Shrinking City, DID(Difference-in-Differences)

SPATIAL AND SOCIAL INEQUITY IN URBAN PARKS AND RECREATION: THE ROLE OF THE PRIVATE GREEN AND OPEN SPACES

Abstract ID: 1217
Individual Paper

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Urban green spaces (UGS) are an essential green infrastructure for planning sustainable cities. Equitable UGS contributes to improve public health and human well-being. Although previous studies identified the inequity of UGS, and it threatens environmental justice, they seldom consider UGS provided by private sector (Balooni et al., 2014; Sun et al., 2022; Yang et al., 2022). Moreover, South Korea has unique residential environment that a large-scale and high-rise condominium is the most common type of housing. Since the mid-2000s, a development of eco-friendly condominium has been popular to strengthen the housings’ competitiveness. Consequently, there has been some cities where the area of green space provided by condominium built by the private sector is larger than those of the public green space.

Namely, private UGS has become an important green infrastructure in urbanized areas because it is regarded as a neighborhood park, which is used by all nearby residents (Al-Kofahi et al., 2019). Meanwhile, the expensive and luxurious condominiums are more likely to provide better private UGS for residents. This means that people who...
cannot afford to live in these expensive housings may be excluded from the benefits of private UGS. In this regard, this study examined whether private UGS (the green space of condominium) has further deepened spatial inequity of UGS.

The spatial scope of this study is Seoul metropolitan areas and five metropolitan cities (Busan, Daegu, Daejeon, Gwangju, Ulsan), which are the most urbanized cities in South Korea. The temporal scope is 2005 and 2020. The green spaces inside the condominiums had not developed well until 2005. Although some condominiums included private green spaces, it was generally interior space circumscribed by the walls for preventing visitors’ access. So, this study analyzed whether private UGS has deepened the inequity by comparing the spatial distribution of private and public UGS in 2005 and 2020. The unit of analysis is “eup/myeon/dong”, the smallest administrative division (neighborhood) in South Korea. The several GIS data, such as Land cover map, land use map, building boundary map, are utilized to quantify area of private UGS inside condominium and public UGS. Housing and socioeconomic data are collected to evaluate the quality of neighborhood and level of social vulnerability.

This study conducted a geographically weighted regression (GWR) and local indicators of spatial association (LISA) to explore the relationships between the accessibility of UGS and neighborhood characteristics. First, LISA is conducted to detect spatial hotspots and outliers of both public and private green spaces in 2005 and 2020. Then, GWR is conducted to examine spatial relationships between UGS and several socio-economic statuses.

This study provides a new perspective of UGS by highlighting the importance of private UGS. It is important to understand to what extent public UGS can be substituted or complemented by private green space. When planning the equitable urban green space, urban planners should consider how private and public green space can be integrated to alleviate the spatial inequity of UGS in the future.

Citations


Key Words: Urban green spaces (UGS), Environmental justice, Urban inequity, Condominium

RESURRECTING SOCIAL PLANNING: LEARNING FROM MIGRANTS FOR AN INTEGRATED APPROACH TO COMMUNITY HEALTH AND WELL-BEING

Abstract ID: 1271
Individual Paper

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Problem: What is social planning and why does it matter for urban justice and health equity? The COVID-19 pandemic has exposed the disconnect between urban planning, public health, and social work fields and their failure to reach historically vulnerable communities (Pimentel Walker et. al, 2021). Ensuring the health and well-
being of racial-ethnic minority groups requires us to decenter our current planning approaches from the built environment to also focus on community-controlled forms of social planning.

This article builds upon findings from a transdisciplinary Participatory Action Research with Refugee and Immigrant-Led Community-Based Organizations (RI-CBOs) to reflect upon the forgotten idea of social planning and its common roots in physical planning and health and human services, recuperating the common history of urban planning, public health, and social work (Healey, 2007; Hemmens, 1978; Jones and Harris, 1987, Teitz and Chappel, 2013: 206).

Methodology: Two surveys, one conducted in 2018 and another in 2020 and the interviews that followed each of the surveys, inform our study. In 2018, an organizational survey was conducted to document the nature and scope of RI-CBOs and the services they provide. The in-depth survey consisted of 258 closed-ended questions about the nature and scope of activities. We documented RI-CBOs’ size, budgets, communities served, and links to service providers. Three sections documented services to individuals and families, community-wide activities, and advocacy with local, state, and federal agencies. The survey covered the realm of healthcare, housing and transportation, human services, and citizenship and naturalization. We administered the survey to 21 organizations; for the purposes of this article, we analyzed results from 18 organizations (8 African, 8 Asian and 2 LatinX). We excluded three that were not migrant-run organizations and were instead only migrant-serving. Organizational leaders completed the survey. Surveys were administered by two people - a faculty member or doctoral student accompanied by an undergraduate or master’s student. On most occasions, we had two survey respondents from each organization. The in-person survey administration was followed by semi-structured interviews to understand further context.

The second survey was co-designed with RI-CBOs in 2020 with the goal of documenting their activities and services during the COVID-19 pandemic. Three RI-CBOs demonstrated interest and capacity to partner and self-report their activities, resulting in sixteen RI-CBO leaders completing a daily survey of RI-CBO-related activities from March to September 2020. Subsequently, multiple semi-structured interviews with the 16 RI-CBO leaders (a total of 39) were conducted to provide an understanding of how RI-CBOs prioritize community needs and engage with community members and external actors (government agencies, civil society actors, and corporate enterprises) to protect their communities from the adverse impact of the pandemic. We also conducted interviews with the city equity officer and head of the county health department.

Finding and Takeaway: Our findings demonstrate that RI-CBOs embody the neglected mission of the social planner, teaching us lessons about people-centered planning to promote community health and wellbeing. They became especially relevant during the COVID-19 pandemic, a public emergency that requires integrated support systems to vulnerable communities. We explain that social planning, as a paradigm shift and an institutional change, can better protect communities of color, including migrants, from negative social and environmental factors. And we offer that it is a helpful means to integrate the ecological model of health into planning practice. Ecological models of health (EMH) help us to understand how people interact with their environments (e.g. policies, the built environment, community support systems), to promote wellbeing of marginalized populations (Hawkins et al, 2021), while social planning is community-centered and social justice-oriented.

Citations


Key Words: social planning, ecological model of health, migrant model of care, Refugee and Immigrant-Led Community-Based Organizations (RI-CBOs), institutional racism

CIVIC ENGAGEMENT AND GENDERED LEADERSHIP IN WAR-TORN SOCIETIES: A COLOMBIAN CASE STUDY ON COMMUNITY FORMATION IN POST-WAR CITIES

Abstract ID: 1287
Individual Paper

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In 2016 the Colombian government and the guerrilla group FARC negotiated peace. A fifty-year-long civil war left 7 million displaced people in precarious urban settlements. Through a government housing restitution program, 100,000 displaced households received apartments for free. This paper analyzes the processes of community formation and civic leadership with a focus on gender differences in three neighborhoods of that program. It describes the practices of community formation, the factors driving different leadership styles, and the coping mechanism underlying social action during eight years of coexistence. This study will contribute to the post-conflict urbanization literature by shedding light on the process of social cohesion amidst a war-torn society. It will also inform policies aiming at sustainable housing solutions in post-disaster and post-war contexts.

I used an ethnographic approach in a comparative case study of three neighborhoods –Salamanca, Millennium, and Ciudadela MIA– in three middle size cities. The sites show differences in levels of violence and poverty that are rooted to some degree in structures of inequality, corruption, and the spillovers of war. Likewise, these sites display contrasting physical qualities, such as public and communal spaces and distance to the city centers.

I analyzed qualitative data from the three sites. I studied the regulations and secondary government data regarding the program implementation. I conducted 86 in-depth interviews with residents and officials. The interviews focused on people's perceptions of the projects' environment and their participation in social programs. I conducted participatory observation for about three months in each neighborhood. These methods allowed me to analyze residents' practices of community engagement and the roles of women leaders in the projects.

After coding the data, I built explanations for community formation and civic leadership upon factors such as poverty level, perception of safety, gender, rates of single household heads, and access to public and communal spaces. Another key factor in understanding the phenomena is the involvement of city halls with the communities. Thus, I compared municipal investments, including quality urban design, social services, and infrastructure. I focused my analysis on leaders' strategies to guide civic action in environments perceived as highly unsafe where negotiation with gangs became part of their roles.

I found that the agglomeration of postwar aid recipients in Salamanca, coupled with the early allocation of communal spaces, unleashed the delivery of further poverty alleviation programs to the neighborhood. The other two sites did not receive significant investments from the local governments, nor did they attract further peacebuilding aid that positively impacted the community.

Salamanca's household composition is majority married couples, while single-headed households are the majority in the other two neighborhoods. In Salamanca, leadership took gender roles with men negotiating with gangs, organizing parties and protests, and maintaining clientelist relationships with local politicians. Women, instead, took charge of courses, charity, and programs aimed at children and elderly residents. When violence rose, the leaders in the three sites shifted their activities to smaller audiences in their buildings.
This paper engages with the literature claiming that social housing projects enfranchise neglected groups and allow them to politicize their space (Rodriguez, 2021). It also built on the peacebuilding literature that sustains that some caregiving roles became feminized labor in the post-war context (Justino, et al., 2018; Miraftab, 2006).

Citations


Key Words: Restitution, post-war, Community

CENTRALIZING CARE WORK AND SOLIDARITY FOR CLIMATE JUSTICE IN THE NETWORKS BETWEEN CLIMATE ACTIVISTS AND THE CITY OF TORONTO

Abstract ID: 1289
Individual Paper

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In Toronto, there have been both grassroots climate activism and municipal policy development for climate action in recent years. Climate action at the city scale has unique qualities as it can counteract national governments' failure to achieve the carbon emission reduction goal. The City of Toronto has a history of creating supportive policies for reducing greenhouse gas emissions (Bulkeley et al., 2013; Umbers, 2020). Toronto is home to many diverse immigrant communities from around the world that are highly vulnerable to climate change impacts. According to the City of Toronto’s Transfrom TO Net Zero Strategy, the city will experience hotter and wetter summer weather due to climate change impact (City of Toronto, 2021). The Bangladeshi diaspora community living in the inner suburbs of Toronto has several activists and neighbourhood organizations engaged in various forms of climate action and programming to support their community members. Many community members are recent immigrants with families and senior citizens who are already vulnerable and experiencing precarity to secure housing, access health care, and find meaningful social and cultural connections in the city. Activists and neighbourhood groups address the community members' needs through their programming and organize climate action guided by their sense of responsibility to address the global climate crisis and manifold injustices experienced by their community. Some examples of their climate action program include workshops on composting and sustainable waste management, environmental storytelling programs for children, women’s support groups, career counselling, and pollinator gardening in the city. Many of these programs have been funded by the City of Toronto’s Climate Action Fund and other non-profits. The City of Toronto also has a Neighbourhood Climate Action Champion program providing support to citizens interested in organizing climate action in their neighborhoods. In this program, the city prioritizes participants from equity-deserving neighbourhoods who are developing ideas for climate action in their neighbourhoods for the first time. Drawing from the work of grassroots activists and municipal programs and policies, I study how collective care work becomes climate justice work in the city. I define collective care as "caring with others" that goes into building communities and supporting their members to survive in precarious situations, such as in the areas of food and sustenance, emergency shelters, health support, childcare, educational programs, and ecological care work to repair damaged ecologies. Caring with others can create relations of solidarity in precarious situations (Tronto, 2015). I argue that the ongoing relationships between the activists, non-profits and city officials create spaces where citizen's climate anxiety can be expressed, community members can learn about available resources for organizing future action and build
solidarity networks with others, and participants can frame a conceptualization of climate justice that also addresses existing injustice and inequity in the city.

Citations


Key Words: Climate justice activism, Care work, Municipal climate policy

THE LEGACY OF LOCALLY-SPECIFIC ORGANIZING TRADITIONS AND PRACTICES IN TORONTO: ANALYZING BLOCK SIDEWALK’S SUCCESS

Abstract ID: 1301
Individual Paper

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Much of the scholarship that is critical of smart cities is concerned with a lack of citizen participation in the management of existing smart cities (Kitchin, 2015). For example, there is a growing body of literature that interrogates the ways citizens use digital civics to challenge the corporate smart city, and the strategies citizens use to subvert smart city power structures by repurposing technologies. However, there is limited study of instances whereby smart city planning processes are challenged by grassroots movements, and especially where those movements are successful. As well, there is a need to better understand existing power dynamics in smart city planning processes and identify potential approaches for the redistribution of power.

This paper contributes to scholarly efforts to understand the variegated processes by which smart cities are subverted through a case study of the community-based Block Sidewalk campaign formed to resist the Quayside smart city in Toronto. Block Sidewalk was organized in response to the exclusionary practices of a state-led participatory planning process, and was successful in altering the state-led planning process and contributing to the ultimate cancellation of the smart city plans. Although organized resistance is common within large-scale participatory planning processes, Block Sidewalk’s effectiveness is unique in the context of top-down smart city planning (Shelton & Lodato, 2019). The objective of this paper is to understand why and how Block Sidewalk was so impactful, and to consider the applicability of Block Sidewalk’s approaches in other contexts.

This research primarily used semi-structured interviews with Block Sidewalk founders, members, and advisors, along with planners, consultants, and policymakers involved in the Quayside planning process. As well, participant observation was conducted on Block Sidewalk organizing meetings, and discourse analysis of the campaign’s planning and communications materials supplemented insights collected from interviews.

Findings reveal that Block Sidewalk’s rootedness in locally-specific organizing traditions and practices contributed significantly to its success. Silver et al. (2010) note that “context shapes civic participation” (p. 462). The Toronto context is unique in a number of ways that enabled the emergence, growth, and impact of the Block Sidewalk resistance. There is a robust constituency of local residents and community-based organizations that are heavily
involved in waterfront planning and development processes, which distinguishes Toronto from other post-
industrial waterfront contexts. As well, a new wave of organizing approaches developed in the 1990s in Toronto,
including a particularly effective “networked approach” to challenging top-down planning practices through
coalition building between community-based organizations (Viswanathan, 2010). I find that Block Sidewalk
strategically employed the Toronto-based networking approach by welcoming members of, and often
collaborating with, established community-based organizations, local institutions, and other independent critics of
the Quayside project. As well, findings illuminate Block Sidewalk’s strategic communications and effective
approach to organizing and facilitating meetings.

Not only can Block Sidewalk’s strategies serve as useful tools for other organizing campaigns, but the results of this
study and the identification of Block Sidewalk’s impact also contribute to scholarship that expands concepts of
participatory planning to include formal, top-down initiatives as well as informal, bottom-up responses (see
Legacy, 2017; Silver et al., 2010). This research deepens acknowledgement of consensus-building and conflict, and
top-down and bottom-up power, as important, legitimate, and co-dependent forms of the broader participatory
planning process.

Citations

Regions, Economy and Society, 8(1): 131–136.
• Shelton, T. and Lodato, T. (2019). “Actually existing smart citizens: Expertise and (non)participation in the
making of the smart city.” City, 23(1): 35-52.
• Viswanathan, L. (2010). "Contesting racialization in a neoliberal city: cross-cultural collective formation as

Key Words: participatory planning, community organizing, smart cities

MAPPING INDIRECT COMMERCIAL GENTRIFICATION ACROSS TIME AND SPACE
Abstract ID: 1312
Individual Paper

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Despite some growth in commercial gentrification literature, much of the U.S.-based scholarship has primarily
focused on black and white consumers and the East Coast. Methodologically, research on commercial
gentrification is mainly quantitative or mixed methods. Researchers often rely on mapping, field surveys, or case
studies to examine changes in the types of businesses, such as cafes, yoga studios, and micro-breweries. Some
studies have utilized business directories to develop commercial gentrification indexes and counted stores while
analyzing store types. Few studies examine the race or ethnicity of retail business owners and offer general
descriptions of a sense of place and identity. However, there is a lack of literature that explores commercial
gentrification and indirect displacement using GIS and ArcGIS StoryMaps to analyze the indirect displacement of
businesses, including those that target working-class and immigrant consumers and cater to more privileged
consumers. Fewer studies examine commercial change with a broad temporal scope and even fewer focus on the
downtowns of major central cities. Our question is: What do commercial indirect displacement and replacement
look like across time and space in a downtown undergoing large-scale revitalization? We focus on Downtown Santa
Ana’s main commercial street, Fourth Street. Santa Ana is in Southern California, about 30 miles south of Los
Angeles, approximately 100 miles north of the United States-Mexico border, and 10 miles from upper-middle and
upper-class coastal cities. The downtown has changed in form and culture through the 1960s and 2020s. The area
has changed from dilapidated buildings and high vacan-
cies to a new La Cuatro (Fourth Street) commercial identity
by the 1980s, catering to Mexican, working-class, and immigrant communities with jewelry stores, shoe stores,
bridal/quinceñera shops, clothing stores, among other amenities. Especially in the past two years, the city has
developed a series of public-private partnerships to launch large-scale gentrification across the downtown core.
We utilize diverse data sources, including business directories and photography. The dataset covers five decades,
from 1980 to 2020. Its qualities include counting businesses, coding for business types, who businesses market to,
social class, generational status, and race/ethnicity, providing a more nuanced understanding of spatial and
temporal change. We constructed the dataset by referring to a business directory, coding marketing information,
storefronts, social media, Google Street View, Yelp, and archival and personal collection of area photographs.
Overall, this research represents a. unique and comprehensive approach to understanding commercial
gentrification.

Citations

• Kosta, E. (2019). Commercial gentrification indexes: Using business directories to map urban change at
the street level. City and Community, 18, 4, pages 1101-1122.
• González-Romero, Eualdo and Tiffany Seeley. 2022. “Commercial Gentrification in a Downtown ‘Made in
Mexico’: The Case of Santa Ana in Southern California, 1980-2011.” In Gentrification, Displacement, and
Alternative Futures, edited by González-Romero, Eualdo, Zuñiga, E. Michelle, Ashley C. Hernandez, and
Rodolfo Torres, 87-106. Routledge.

Key Words: Ethnic and immigrant commercial strips, Downtown revitalization

GENTRIFICATION AND DISPLACEMENT TO SUBURBS
Abstract ID: 1329
Individual Paper

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This study explores the impact of two increasingly powerful processes in the transformation of the U.S. metropolis —
gentrification in the city and rising poverty in the suburbs. Some studies on the rise of suburban poverty argue
that gentrification-induced displacement is a causal factor with poorer households moving to the suburbs because
they are unable to afford to live in gentrified central locations (Wyly and Hammell, 1999; Hochstenbach & Musterd, 2021). This process of a ‘great inversion’ suggests that high-income groups are
increasingly living in the city and low-income people are forced to the periphery (Ehrenhalt, 2012. While
confirming such theories has enormous implications for the socio-spatial arrangement of the U.S. metropolis,
there is little empirical investigation to test the theory that gentrification is a contributing cause of either suburban
or urban poverty or both. In this study we ask the following questions: 1) does gentrification lead to the
displacement of households from low-income but gentrifying neighborhoods in the city? and 2) are displaced
households more likely to move to the suburbs over city neighborhoods? Using a unique dataset on residential
mobility across large metropolitan areas in the United States (DataAxel, formerly InfoGroup’s U.S. Consumer
Database for years from 2007 to 2017), we find that, households are displaced because of gentrification and in
some metros they are more likely to move to other city neighborhoods and in other metros, they are more likely
to move to suburbs. We utilize a linear regression to fixed effects to determine that, In every case, we find evidence
of displacement to the suburbs, but in general, the more likely scenario is that households in the city are being
displaced to other city neighborhoods because of gentrification.
CHANGES IN SOCIAL RELATIONSHIPS IN A DIVERSE NEIGHBORHOOD DURING THE PANDEMIC: A CASE FROM BALTIMORE, MARYLAND

Abstract ID: 121
Research in Motion (RiM)

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The study illustrates changes in social relationships in an ethnically, socioeconomically, and generationally diverse neighborhood in the face of unexpected external threats, such as a pandemic. Prior to the Covid-19 pandemic, the author conducted fieldwork investigating the social relationships among different groups in a neighborhood in Baltimore, Maryland. This study revisits that neighborhood to explore how the recent pandemic has changed social relationships in the neighborhood.

Unforeseen threats such as a pandemic or natural disaster test the strength of a community’s ties. People residing in a neighborhood must help and cooperate with one another to mitigate difficult conditions. Past studies suggest that cooperation can be more challenging in neighborhoods populated by diverse groups of people because diverse neighborhoods tend to exhibit lower levels of trust than more homogeneous neighborhoods (Dinesen et al., 2020; Putnam, 2007). When the spread of a new and highly infectious disease, namely Covid-19, began altering people’s daily lives and limiting their social interactions in 2020, many diverse neighborhoods struggled as people became defensive and their tolerance for others diminished (Devakumar et al., 2020; Tessler et al., 2020). This study aims to assist community organizers and policymakers in understanding Covid-19’s effects at the neighborhood level and help them create resilient and inclusive, yet diverse, neighborhoods.

From 2013 to 2015, the author conducted ethnographic fieldwork in Baltimore’s Greektown, a neighborhood that had become increasingly diverse with a population of longtime residents (Greek immigrants and their decedents), Latino immigrants, and gentrifiers (mostly white young professionals) (Matsumoto, 2020). That research found that, despite the lack of direct interactions, there were subtle and indirect symbolic relationships between the various groups. These subtle relationships were shaped by residents’ past life experiences, ideological beliefs, and both direct and indirect mutual benefits that helped them to peacefully coexist in a small neighborhood. Based on this past study, the new research revisits that neighborhood to investigate how those relationships have changed since the start of the pandemic by interviewing residents in different groups in Greektown, some of whom are people the author interviewed in 2013–2015. Additionally, former residents who left Greektown during the pandemic are interviewed. Through those interviews, the paper illustrates how the people’s perception of their neighbors in both their and other groups changed and how those changes affected their living conditions.
The early findings suggest that there are clear divisions by social class in terms of residential choices and satisfaction. While wealthier populations—for example, gentrifiers—transitioned to working remotely or moved to suburbs (including to their parents’ suburban houses), many immigrants had minimal choice: They could lose their jobs or, as essential workers, go to work in person and possibly be infected. Access to medical care is also limited. Furthermore, since the border was closed for international travel, immigrants lost opportunities to visit their home countries in person and felt psychologically separated from their family and friends in their home countries. Longtime residents, many of whom are descendants of Greek immigrants, elderly, and living alone, became isolated as their family members could not visit them and a church, a central place in their social lives, was shut down. These frustrating conditions have affected inter- and intra-group relationships in the neighborhood. Some emerging themes are that residents’ social networks shrunk, isolation from their groups increased, and frustration toward other groups was heightened.

Future research will include interviews with city officials, NPOs, and other organizations, such as churches and hospitals, as well as short surveys of current residents.

Citations


Key Words: Social Relationships, Neighborhood, Diversity, Covid-19, Immigrant

THE GOVERNANCE OF EVICTION IN ZHOUGUDUI COMMUNITY IN HEFEI, CHINA

Abstract ID: 217
Research in Motion (RIM)

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This research explores Zhougudui residents’ repeated experiences of displacement in Hefei, a city that is economically expanding and rapidly urbanizing in China. The government’s "Grand Construction" movement, initiated in 2005 and ongoing at present, is an example of ‘authoritarian urbanism’ where massive demolition and land acquisition supported economic development and formed a unique urban governance model. Authoritarian urbanism is the imposition of coercive strategies and the restriction of the development or movement of urban space by authoritarian rule. In this process, urbanization lacks democracy through the form of regulation by strong governments or political figures.

This research documents how residents have experienced repeated rounds of eviction and the threat of displacement. It analyzes the underlying processes involved regarding the evolution of democracy. Wu, Zhang and Lui (2021) highlight the prominent political aspect of China’s contemporary urban redevelopment processes. The current China authoritarian regime exhibits substantial adaptability in rapid urban development, to keep pace with the swift urbanization processes. The regime is maintained through growth, leading to displacement and conflict
Drawing upon the impact-response model, employed by Fairbank to analyze modern history, the escalating government authority in urban development may be concurrently spurring affected citizens to respond. The research describes the interactions between residents and the government under this model, as well as the contradictions that emerge between the growing machinery and the gradually awakening individual consciousness within these interactions.

The Zhougudui community, located at the junction of the former industrial zone and suburbs of Hefei, covers 7 km² and houses nearly 100,000 residents. However, as the city expanded, the urban villages and large-scale agricultural wholesale markets in Zhougudui were unable to keep up with the rapid development, attracting the government's attention for frequent demolition and relocation over the past 20 years. The controversial relocation of the agricultural market to the suburbs and demolition of large-scale informal housing were carried out under strict municipal leadership, forcing residents to leave. With changes in city leadership, rapid demolition has slowed, and Zhougudui is once again undergoing demolition and reconstruction. At the present time, there is evidence of residents resisting this authoritarian approach to governance. Central research questions include: How do residents resist? How do they critique of these actions? Have their experiences of displacement led to the possible growth of a stronger democratic consciousness? How do they negotiate with the government? How have they organized with neighbors and with leaders? In what ways can they express in public their experience, their possible discontent?

This study is an in-depth case study of Zhougudui using qualitative methods. The time frame is based on two points: early 2000s and present, both times of large construction and rapid development in Hefei. The methodology includes an examination of the changes in the built environment. This presentation will summarize the results of semi-structured interviews with community residents, and government officials at sites of displacement; archival research, on-site observation, and analysis of related policies, regulations, and media reports.

This research documents displacements to explore the experiences of urban governance. The study addresses how these acts awaken and transform democratic consciousness and shape interactions with state power in the context of authoritarian urbanism. It fills a gap in understanding how China's unique political system can stimulate grassroots democracy in urban planning. It provides a model for grassroots democracy and promotes further awakening of democratic consciousness, thereby better maintaining social justice and establishing a more balanced power relationship. It will advance the academic understanding of the complex relationship between urbanization, authoritarianism, and democracy and provide practical implications for promoting democracy and improving the quality of governance.

Citations


Key Words: Urbanism, Democracy, Justice, China, Displacement
WHY IS LAND-BASED FINANCE NOT BEING USED FOR CLIMATE ADAPTATION?
Abstract ID: 271
Research in Motion (RiM)

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There is a large and growing literature on the effects of climate change on housing markets (Dunning and Lord, 2020), including valuable work on the increased risk of flooding in some areas (Belanger and Bourdeau-Brien, 2018). Much of this work provides important insights into the changing geography of flood risk (Hinkel et al., 2015) and associations between property markets that are affected by flood risk and inequality (Walker and Burningham, 2011; Fielding, 2018).

Given that the risks to properties in vulnerable locations are now well known it might be anticipated that consent to develop in such locations would be accompanied by a requirement on the developer to provide supporting infrastructure, such as enhanced flood defences, in order to ensure new developments might be expected to remain sustainable over the typical duration of the housing life cycle (100+ years).

However, there is very little research on the degree to which land-based finance – contributions made by the development industry in the course of producing new developments – are being used to mitigate the forecast impacts of climate change.

In this Research-in-Motion contribution new research from the UK will be presented which highlights the discontinuity between the categories of investment that local authorities request of developers and the medium-longer term threats to these developments posed by climate change induced sea-level rise.

Citations


Key Words: Land based finance, Developer contributions, Adaptation to climate change

OPOPORTUNITIES AND CHALLENGES OF EQUITABLE FLOOD MITIGATION INVESTMENT IN CHARLESTON, SC
Abstract ID: 511
Research in Motion (RiM)

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Improving the resilience of a community is a complex and costly process with many stakeholders reaching for limited potential sources of funding. Communities are showing interest in private market financial tools to fund
such efforts, including resilience bonds. Charleston, SC, is among communities pursuing funding sources for mitigation projects, addressing disasters like flooding, sea level rise, king tides, and hurricanes. The City of Charleston, a historical city on the Atlantic coast, has mostly directed funds to near-term disaster mitigation projects such as strengthening buildings, land use regulations, freeboard requirements, green infrastructure, building retrofits, and holistic approaches promoting community resilience. Thus far, Charleston has pursued funding sources from taxes, federal and state grants, and private philanthropies for these mitigation projects. But the City is now facing limited funding available for the implementation of large-scale infrastructural mitigation projects. This paper presents an in-depth qualitative analysis of semi-structured interviews with local resilience stakeholders and financial experts, and review of media articles, and local organizations’ documents in Charleston to understand various dimensions of resilience investment priorities, opportunities, and constraints within a historic context of development and disasters in this area, centered around equity considerations.

Citations


Key Words: flood mitigation investment, resilience bonds, climate adaptation, community resilience

PLANNING IN A STATE OF DISSONANCE: THE ROLE OF RELIGIOUS INSTITUTIONS IN DECOLONIZING COMMUNITY PLANNING IN THE MIDDLE EASTERN STATE.

Abstract ID: 688
Research in Motion (RiM)

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The Middle East has a long history of planning practices shaped by colonialism and authoritarian regimes. In recent years, there has been a growing recognition of the need to decolonize planning theory and practice in the region, and to promote more inclusive approaches that align with the collective identity of the population. In Jordan, Islamic institutions and actors have been increasingly engaged in this process, advocating for a more context-specific and community-based planning approach. This research contributes to the ongoing discourse on decolonizing planning theory and practice by underscoring the importance of recognizing and integrating the perspectives and contributions of Islamic institutions and actors in planning processes in Jordan and the Middle Eastern region, which can ultimately lead to more equitable outcomes.

Specifically, the study aims to address the following research questions: How do Islamic institutions and actors challenge Western-centric planning approaches in Jordan? How can the theoretical perspectives of new institutionalism, insurgent planning, and decolonization be used to understand the role of Islamic institutions and actors in promoting a more rights-based approach to planning practice that is grounded in Islamic values and principles? What are the challenges and limitations faced by Islamic institutions and actors in advocating for a decolonized planning process, and how can these be addressed?

The study is guided by a critical decolonial perspective, which challenges dominant planning paradigms and
recognizes the diverse voices and perspectives that shape planning practice in Jordan. The new institutionalism perspective emphasizes the role of institutions in shaping social behavior and the importance of institutional change in addressing social problems. Islamic institutions are identified as significant actors in shaping planning practices, given their roles in shaping cultural norms, values, and beliefs. The research investigates how Islamic institutions and actors have sought to create new planning institutions that are more inclusive, participatory, and responsive to local needs and collective identity of Jordanians.

The insurgent planning perspective emphasizes the importance of grassroots movements and social mobilization in promoting more democratic and equitable planning processes. Islamic institutions and actors are identified as potential agents of social mobilization in promoting a more decolonized planning process in Jordan. The study examines the ways in which Islamic institutions and actors have sought to mobilize communities around planning issues by building networks of solidarity and mobilizing social movements around planning issues, challenging dominant planning paradigms, and promoting alternative planning practices.

This research employs a qualitative approach, drawing on interviews with key informants from Islamic institutions and actors, as well as document analysis of planning policies, regulations, and initiatives in the Middle East. The study finds that Islamic institutions and actors have the potential to play a transformative role in decolonizing planning theory and practice in Jordan by drawing on the insights of new institutionalism, insurgent planning, and rights in Islam. The research identifies several ways in which Islamic institutions and actors have sought to promote institutional change, social mobilization, and a more rights-based approach to planning practice.

However, the study also identifies several challenges and limitations faced by Islamic institutions and actors in advocating for a decolonized planning process. These include navigating the power dynamics of the planning field and addressing the influence of neoliberalism and globalization on planning practice in Jordan. Overall, the research contributes to a growing body of literature that recognizes the importance of incorporating diverse perspectives and knowledge systems into planning practice, particularly in postcolonial contexts.

Citations


Key Words: Decolonization, Insurgent planning, New institutionalism, Community-based planning, Middle East

ON CAPITAL, POWER AND URBAN RENEWAL MODEL CHANGES: THE ADAPTIVE GOVERNANCE PATH UNDER STATE-LED URBANIZATION GOALS IN A HISTORIC TOWN, YANGLIUQING, TIANJIN, CHINA

Abstract ID: 722
Research in Motion (RiM)

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With the rapid promotion of globalization and industrialization since the 1990s, under the dual forces of capital proliferation and policy guidance, urbanization construction in China has been accelerated, and the frequency of urban renewal activities has increased. A large number of communities and villages have been demolished or rebuilt as a result. Historical and Cultural Towns are especially susceptible to capital impact and policy shifts due to their pivotal position between urban and rural areas and their rare resources. Under the logic of strong state-led development, a series of projects to promote urbanization have caused the communities (villages) in the old city to undergo significant changes in spatial form and governance, and the homogenization of urban features, genetic fault of traditional culture, and fragmentation of local social structure have become increasingly severe, resulting in irreparable damage to the spatial form and context of renowned Historical and Cultural Towns. Compared with cities or villages, Historical and Cultural Towns have more complicated land use, industrial replacement, and population composition. The renewal of its old city is not only a technical problem of heritage preservation, but also a complicated process of social and economic activities, complicating the multi-stakeholders.

Based on an analysis of the process of old city renewal in the historical and cultural town of Yangliuqing, this study examines the capital and power logic underlying the change of old city renewal mode at various stages, as well as the impact of different renewal modes on community social capital. Using Rapid Evaluation and Applied Ethnographic research (REAP), questionnaires, and analysis of coupling coordination degree, it was determined that under the logic of land capitalization and power bureaucratization, the renewal modes of the old urban areas of Yangliuqing include residential expansion renewal under market intervention, tourism development renewal under the leadership of the government, image update renewal under the leadership of the government, and autonomous progressive renewal. Renewal of residential expansion through market intervention can preserve community trust to a certain extent, but community networks and norms are susceptible to disruption. Through the collective resettlement for indigenous people, the government-led tourism development renewal can better maintain community trust, community networks, and community norms. The renewal of image update under the leadership of the government because of a lack of funds, community trust is susceptible to impact, while community networks and norms can be maintained to some extent through the "acquaintance society." In contrast, the autonomous progressive renewal areas still retain a high level of social capital and keep the traditional culture. Often, incremental renewal can provide reasonable compensation to relocated residents and help preserve the social capital of a community. Typically, communities governed by village committees can maintain greater social capital than those governed by neighborhood committees. This study argues that in order to enhance the social capital of communities in renowned Historical and Cultural Towns after the renewal activities, it is necessary to attach importance to the governance system with village committees as the main body, and to increase the support of village committees in cultural activities organization and traditional skills training, which can facilitate the communication between the government and the masses, the formation of neighborhood networks, and the inheritance of traditions.

Citations


Key Words: land capitalization, social capital, urban regeneration, community governance, community resilience
BEYOND COMMUNICATIVE PLANNING: INNOVATING WITH ART FOR COMMUNITY DEVELOPMENT PLANNING

KOCSIS, Joanna [Newcastle University] joanna.kocsis@utoronto.ca, presenting author

Populations often receive the label “hard to reach” for the same reasons they receive the label “at risk”. “Hard to reach” may refer to a population’s physical or social location, or the fact that the population is vulnerable or hidden. Populations are often “hard to reach” because they are excluded from social or material privilege and their perspectives are devalued. The creation of knowledge is a deliberate and politically charged project and participation in it “requires the acquisition and acceptance of a new form of consciousness that not only displaces but often devalues” an excluded group’s consciousness (Kirkness and Barnhardt, 2001 p. 9). When planning for inclusiveness, then, how can planners bridge the divide between what has traditionally counted as valid and valued knowledge (Healey, 2006), and the voices and experiences of communities that are “hard to reach” or “at risk”? This Research In Motion presentation will share insights on the conceptual, ethical, and logistical differences in three forms of arts-based community engagement research. It offers planners practical guidance on the ways in which theatre, film and animation can be mobilized to generate knowledge with communities often excluded from planning discussions, while acknowledging the real constraints they face away from the planning table (Innes and Booher 2016).

The methods discussed here were developed in a research project that examines the use of public space by a group of 12- to 23-year-olds living in the territorially stigmatized neighbourhood of Old Havana, Cuba. This longitudinal case study explores how the touristification of their neighbourhood impacts young peoples’ use of public space for identity work and meaning-making during a time of unprecedented political and economic transformation on the island. Both the topic and the context of this research demand methodological innovation, not only to protect the participants from external risks (both interpersonal and political), but also to help them communicate affective experiences they have not previously expressed in words. Our solution was what I call the collective creation of performed fiction, a form of projective storytelling in which participants draw on their own experiences to create and perform composite stories rooted in their personal experiences, without the consequences of revealing intimate details of their personal lives. Participants are asked to tell stories about “people like you” or “a neighbourhood like yours”. Engaging in projective storytelling allows them to speak about difficult topics under the guise of fiction, and performing the stories allows them to access and communicate knowledge that is beyond cognitive or verbal.

Encouraging authentic dialogue in which everyone is equally empowered to speak can become problematic when it is not accompanied by the same equality of rights outside of that communication space (Kocsis, 2022; Purcell; 2009). We have experimented with this method in multiple forms and this presentation will reflect on: the ways in which the mode of creative performance impacts the knowledge we create, how each mode raises unique ethical questions to be attended to, and the logistical differences between executing theatre, film, and animation activities with community groups.

Citations


Key Words: Community Development, Arts-Based Research, Anti-Oppressive Practice, Planning Research

WHOSE URBAN REVITALIZATION? DIFFERING VANTAGES OF BLACK DEVELOPERS AND BLACK RESIDENTS
Abstract ID: 782
Research in Motion (RiM)

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Urban revitalization holds promises of enlivened economic activity and livability to depressed areas, while at the same time posing perils of uneven development that deepen intersectional divides of race and class. Some scholars have argued that representation of real estate developers of color can mitigate some of the negative divides produced by redevelopment because they are more sensitive to the needs of marginalized residents and neighborhoods. However, developers are likely to be incentivized by the economic profitability of revitalization, while disadvantaged long-term residents require meeting their basic needs of livability (Stein, 2019). Through mixed qualitative methods, we compare the views on redevelopment of Black developers and Black long-term residents in Detroit to assess how closely aligned their priorities and perspectives are for shaping urban prospects.

Real estate developers play a central role in shaping the built environment and economic development of cities, but their impacts on cities do not always benefit long-term residents (Harvey, 1985; Mele, 2017). Detroit, Michigan, the U.S.’s poorest and Blackest large city, was hit hard by the Great Recession in 2008 and the city’s bankruptcy in 2014. Long-term residents weathered decades of disinvestment and capital flight, which resulted in a 25% population loss in the city between 2000-2015. Since the bankruptcy, residential and commercial developments have sprouted up. These are mostly concentrated in and near the downtown core, with additional "strategic neighborhoods" also targeted for investment. Many of these development projects have been undertaken by established for-profit developers, which are large, well-capitalized, and predominantly white. A smaller contingent of African American for-profit developers operates in the city, but they are less well financed and less connected to resourced networks. Priority has been given to improve Black and Brown representation among real estate developers, especially since 2020, as a mechanism to address systemic racism. We studied revitalization in Detroit over two rounds of data collection: ethnography with a long term resident association in a “strategic neighborhood” from 2017-2019 and case study interviews of developers in 2023.

We found that Black developers and Black long term residents in Detroit characterize development differently. Four themes emerged to explain these differences: wealth, racism, community, and housing. Both developers and long-term residents focus on wealth, especially building family wealth over generations. However, developers tend to approach profit generation in a more individualistic way and long-term residents reflect a community scale of concern for wealth building. Likewise, both developers and long-term residents face structural racism, but differently. Developers face barriers at every step of the business, particularly acquiring the capital and financing to make developments possible. Long-term residents, on the other hand, are living in neighborhoods that have suffered physical deterioration and are struggling with meeting basic needs. Developers approach community as one of the barriers to approving developments, while long-term residents refer to community wellbeing as the major goal of redevelopment. Lastly, on the question of housing, developers tended to downplay the need for more affordable units, while long-term residents amplify the crisis of affordability facing their community.

In conclusion, this study contributes novel evidence of the operations of developers in weak real estate markets, with a particular focus on how racial disparities play a role in contemporary U.S. urban revitalization prospects. We
found that developers’ visions of revitalization tend to center their own profits, while long-term residents prioritize investments to meet their community’s basic needs. Our findings indicate that Black developers and Black long-term residents do not have a reciprocal relationship in terms of expectations and outcomes of urban revitalization. This challenges the argument that increasing representation of Black and Brown developers will benefit marginalized long-term residents.

Citations


Key Words: Real estate developers, Racial disparities, Urban revitalization, Detroit

SHIFTING TRENDS IN PLANNED COMMUNITY DEVELOPMENT: A LONGITUDINAL ANALYSIS OF THE VISION TARGET CONSUMERS AND DESIGN PRINCIPLES OF FLORIDA’S PLANNED COMMUNITIES INITIATED BETWEEN 1972 TO 2015
Abstract ID: 803
Research in Motion (RiM)

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Developing residential and mixed-use communities on the outskirts of urban boundaries have been the primary means by which American metros have expanded since the rise of the automobile (Jackson, 1985). However, the history of such planned community development practice has been deeply associated with the history of race- and class-based exclusion. Developers of planned communities created and enforced racially restrictive covenants to keep racially homogenous communities; they also contributed to the institutionalization of discriminatory real estate and banking practices further cemented the patterns of residential segregation (Glotzer, 2020).

Since the passage of the Fair Housing Act of 1968, the place of exclusion and inclusion in planned community development practice has been mixed. On the one hand, developers turned to gated communities as a lawful tactic to create homogenous and exclusionary suburbs (Blakely & Snyder, 1997). On the other hand, ambitious social experiments to create racially and socioeconomically integrated planned communities also existed in the 1970s (Burby & Weiss, 1976). Most recently, Kim (2023) reports that contemporary developers are increasingly embracing diversity and inclusion, albeit for profit-driven motivations. How the practice of planned community development would fare in their contributions to, or remediation of, race and class-based exclusion is a question yet to be answered definitively.

This research project traces the history of community development practice in Florida since the passage of the Fair Housing Act. Florida presents a rare opportunity to identify uninterrupted trends in planned community development practice, as the state had an extremely robust state administrative review process for approving large-scale real estate developments. In 1972, the Florida legislature established the concept of “developments of regional impact (DRI)” and started overseeing the entitlement processes of real estate developments that were determined to have regional impacts. Although this state oversight was terminated by the legislature in 2015, the database that contains all of the original entitlement documents and subsequent modifications are publicly available.

We ask: how have the vision, target consumer demographics, and design principles of planned communities evolve since the passage of the Fair Housing Act? How have the developers modified the vision, target demographics, and design to adapt to the shifting market and socioeconomic conditions over time? To answer these questions, we
will analyze the contents of all entitlement documents associated with residential and mixed-use DRI projects in Florida from 1972 to 2015. We will analyze the stated vision for the community, target consumer income groups, housing price and rent levels, housing tenure composition, land use mix, amenities package, and other relevant planning and design principles that can be found in the original applications of the communities. We will trace how these elements evolved over time in response to the changing market conditions and the demographic and cultural shifts of the U.S. society.

Citations


Key Words: Master-planned Communities, Gated Communities, Residential Segregation, New Urbanism, Diversity and Inclusion

CARING FOR LIFE: INSURGENT PLANNING AND GRASSROOTS TERRITORIAL CONTROL DURING THE PANDEMIC

Abstract ID: 850
Research in Motion (RiM)

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The Chilean government’s initial handling of the COVID-19 pandemic has been widely criticized due to its delays and reactivity; lack of transparency when reporting infection, testing, and death rates; and insufficient economic measures to support the population. In a highly centralized political context, where public health policy is made nationally but implemented locally by municipalities with radically dissimilar financial and health care capabilities, rural areas with high Indigenous population are hyper-vulnerable. This Research in Motion (RiM) presentation discusses a project that examined the potential of grassroots Indigenous-led responses to the pandemic, focusing on the spontaneous rise of self-organized, community-led checkpoints in a Southern Chilean municipality called Tirua. For six months, Indigenous communities, civil society organizations, and the local government collaborated to restrict access to the area through strict protocols defined locally. Thanks to these measures the community was able to keep the spread of the disease under control and prevent COVID-related deaths, particularly among Elders.

At the request of Tirua community members, a team of Mapuche and Chilean researchers of which I am part produced a mini-documentary to help document the process and give it wider visibility. Labeled by the Chilean government as illegal, through this digital ethnography project (Sandercock and Attili, 2010) we show how the community checkpoints in Tirua are an insurgent, Indigenous-led form of community planning and territorial control grounded in Mapuche legal orders and local knowledges, which sought to protect life. Through in-depth interviews with people directly involved in the actions and analysis of official public health data, the documentary sheds light on the rise, evolution, and effectiveness of this local response, raising questions about the potential of community-based responses for emergency preparedness planning.

This project adds to the literature on Indigenous and insurgent planning (Jojola, 2008; Matunga, 2013; Sandercock, 1998; Miraftab, 2009) by producing grounded knowledge that challenges dominant policy discourses and centres local approaches and ways of knowing. Better understanding local, grassroots responses not only sheds light on the power of community-led public health efforts in places where state action is insufficient or inadequate, but
also allows to identify how contextual knowledge has the potential to achieve more equitable public health outcomes in a pandemic context, with implications for the formulation of plans and policies that are responsive to local realities. More deeply, in a context of internal colonialism and Indigenous dispossession, the project begins to shed light on how/if these kinds of responses strengthen community cohesion, both among Indigenous communities and with non-Indigenous people in the area, which might have implications for Mapuche struggles for Indigenous territorial control and justice more broadly.

Citations


Key Words: Insurgent planning, Indigenous planning, Territorial control, COVID-19, Digital storytelling

LEARNING TOGETHER: UNDERSTANDING BARRIERS AND BUILDING INFRASTRUCTURE TO SUPPORT COMMUNITY ENGAGED SCHOLARSHIP

Abstract ID: 896
Research in Motion (RiM)

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Anchor land grant institutions are questioning their role in conducting impactful research in and with the community and, more broadly, how to engage with the community as a research institution (APLU, 2019; Gavazzi and Gee, 2018). Educational institutions have tremendous impact on nearby communities, both providing research and services, but also acting in a development capacity, resulting in both positive and negative community outcomes (Wolf-Powers 2022, Ehlenz 2021 & Etienne 2012). Community engaged scholarship (CES) provides an opportunity to bridge university expertise with community expertise to co-create solutions for addressing systemic community challenges. Despite this potential, substantial disagreement, non-adherence to best practices in community engaged scholarship and lack of consensus can limit and undermine the utility of community engaged scholarship (Harris 2021 & Clark et al. 2022).

The recently developed Ohio State University Academic Plan calls for enhancing infrastructure to strengthen collaborations with external communities, increasing the impact of our research, service and care and empowering and recognizing our faculty, staff and students who conduct high caliber community engaged scholarship (2022). This proposed session will present research, engagement activities and organizational infrastructure development at the university to strengthen the impact of reciprocal community engaged scholarship.

Ohio state faculty, staff and students are engaged with community partners across Central Ohio, the State of Ohio, across the country, and globally. These engagements take many forms including community-based programs/outreach, public service, service learning, community engaged teaching and community engaged scholarship. As one of the largest land grant universities in the nation, with a comprehensive and engaged medical
center, understanding the breadth and depth of these activities on an ongoing basis can be challenging, but is needed to provide a systemic view of our collaborative work with community partners. To better understand the barriers and potential opportunities for supporting community engaged scholarship, we conducted qualitative research with community stakeholders and conducted an asset mapping initiative to identify, promote and leverage our highest impact community engaged research efforts.

Our research gauging community stakeholder experience and perspectives on working with university researchers reinforces the importance of this work in the community. There is a strong desire for OSU to be part of meaningful, transformative community change through impactful research (Clark et al 2022). Our research also identified challenges and erosion of trust that can occur when CES is not reflecting best practices in engaged scholarship. Community stakeholders were clear in identifying the attributes of engaged scholarship that they consider effective, such as reciprocity, participant centered processes, co-design with community, cultural competency and understanding of community context. Our asset mapping initiative is intended to further strengthen our community engaged scholarship infrastructure, identify new opportunities and identify significant unmet needs. An asset mapping process has been beneficial in better understanding our points of strength, depth and capacity in community engaged scholarship. Asset mapping can also be used to create interactive tools and resources for community partners and our faculty, staff and students who are conducting community engaged scholarship. The session will close with lessons learned through these ongoing efforts to foster high impact reciprocal community engaged scholarship.

Citations

- APLU (2019). "Public impact research: Engaged universities making the difference". (Washington, DC)

Key Words: Anchor Institute, Community Development, Engaged Scholarship, University Community Relations, Asset Mapping

WHO HAS THE RIGHT TO GOVERN SETTLER-COLONIAL CITIES? DESTABILIZING SETTLER PLANNING AUTHORITY THROUGH COUNTER-CARTOGRAPHY
Abstract ID: 1218
Research in Motion (RiM)

MALONEY, Keisha [University of British Columbia] maloney.keisha123@gmail.com, presenting author

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is unequivocal about the rights of Indigenous peoples to occupy, use, develop, and govern their lands (see Articles 4 and 26). The adoption of the UNDRIP in Canada in 2013 was demanded in the Truth and Reconciliation Commission (TRC) Calls to Action 43 and 44. This paper will contribute to the ongoing discussion in Indigenous governance, planning and law, that, to honour these jurisdictional guides as they were written requires amending our current land governance system. Through claiming territory on a map, settler sovereignty has become perfected by fusing claims of sovereign authority with territorial jurisdiction, granting settler governance the right to organize, extract from, and alter Indigenous lands. Shiri Pasternak encourages us that settler sovereignty can be destabilized through a reorganizing
systems of land governance, toward a system based upon an “epistemic web” of nested and relational governance (2017; Simpson 2014; Webber 2016). Indigenous theorizations regard ‘nested’ (Simpson 2014) or ‘relationally constructed’ (Webber 2016) forms of sovereignty, where multiple sovereignties overlap, necessitating good terms upon which to coexist and cogovern. This offering opens the door to emphasize a new relationship between the settler municipal planning system and Indigenous peoples must be fostered if planners are to implement the UNDRIP Articles and TRC Calls to Action meaningfully and honourably. Thus, this research is motivated by the question, how can planners challenge planning systems from within to be more amenable to Indigenous sovereignty, specifically their sovereign authority to govern the usage and development of the land? How does this interact with, and possibly destabilize, the wider settler-colonial city system? These questions nudge open the door to imagine a relational reconstruction among settler and Indigenous land governance.

Often regarded as ‘A Carrying Place’, Toronto has been navigated and nurtured by over 120 First Nations for time beyond mind. Engaging with this multiplicity and applying ‘critical place inquiry’ (Tuck and McKenzie 2015), which asks qualitative researchers to meaningfully engage with the complexity of place, allows the research to address these questions from beyond the spatial boundaries defined by modern treaties. Thus, the research conducted walking ethnographic interviews with those who self-identify as Indigenous, though may be from lands beyond the colonial borders of Toronto. Walking ethnographic interviews allow for a transcendence of temporal boundaries as we move across past, present, and future, making it an impactful method for imagining in and through city spaces (Moretti 2017). These discussions were informed by Margaret Kovach’s conversational method and employed a non-violent communications framework, to create a safe space for collaborators to describe their relationships to the land and built spaces of Toronto. Common themes from the interviews were drawn out through grounded theory coding, where each line of text was given a single word theme, which were then collaboratively mapped onto the walked paths using counter-cartography. The practice of counter-cartography refuses settler-colonial order by (re)presenting place/space/land, working to resist dominant power structures and centering alternative narratives in conceptualizing and engaging with space. In reclaiming the map through counter-cartographies that represents their relationality and futurity, Indigenous peoples are (re)centered on the map, and thus their relations and worldviews can inform planning praxis. Preliminary research suggests that this (re)visioning of land relations creates porosity in land use planning, making space to collaboratively reconstruct land governance systems, though will be further studied through summer 2023. As such, planners can continue making space to honour the sovereignty of Indigenous peoples in settler-colonial cities by engaging with Indigenous land relations and governance, through counter-cartographical practices.

Citations


Key Words: Indigenous sovereignty, relational governance, arts-based methods, counter-cartography

THE IMPACTS OF THE NEIGHBORHOOD ENVIRONMENTS ON COGNITIVE HEALTH OF COMMUNITY-DWELLING OLDER ADULTS

Abstract ID: 1225
Population aging is one of the biggest global challenges in the 21st century, which has generated many public health challenges and concerns including dementia. Older adults are more vulnerable to environmental stressors due to decreased internal capabilities and higher dependence on neighborhood resources for social interaction and other daily needs [1]. Although some preliminary findings showed that neighborhood environments may affect cognitive health of older adults [2,3,4], empirical evidence is lacking about neighborhood environments in relation to different cognitive domains which might have different sensitivity or relevance to different environmental features. To fill this research gap, this study examined the cross-sectional associations between neighborhood environments and different domains of cognition among community-dwelling older adults aged 65 or older and whether the associations vary by age. Data used in this study was from the Round 5 of National Health and Aging Trend Study (NHATS). The study sample included 6,788 community-dwelling older adults aged 65 and older without dementia. Poisson regressions were performed to examine the relationships between two neighborhood environment factors (neighborhood physical disorder and neighborhood social cohesion) and four cognitive domains (immediate word recall, delayed word recall, orientation, and executive function), and the sub-group analysis by age. After controlling for sociodemographic, health, and mobility factors, we found that neighborhood physical disorder was significantly associated with worse immediate word recall and delayed word recall but not significantly associated with orientation or executive function. Neighborhood social cohesion was not found to be significantly associated with any of the cognitive measures. The sub-group analysis showed that the negative associations of neighborhood physical disorder with immediate word recall and delayed word recall were only observed among older adults aged 65-79 not among those aged 80 and older. Older adults aged 80 years and older tended to have more severe cognitive impairment as there was a general cognitive decline with age [5]. Therefore, it is likely that the detrimental effects of neighborhood physical disorder on severe memory decline might be negligible. Future longitudinal studies are needed to understand the underlying mechanisms of the neighborhood environment effects that may be harmful to the cognitive health of older adults aged 65-79 especially those living in neighborhoods with high physical disorders.

Citations


Key Words: Neighborhood environment, Cognition, Older adults

NEIGHBORHOOD BUILT ENVIRONMENT AUDIT RESEARCH ON CHILD-FRIENDLY PERSPECTIVE
Background: The United Nations Children's Fund (UNICEF) has been promoting the "Child-Friendly Cities Initiative" worldwide, and China aims to build 100 child-friendly cities by 2022. Building child-friendly environments is crucial for urban renewal, particularly at the community scale, where the micro-built environment significantly affects children's daily activities and environmental perception. However, this aspect is often overlooked in urban planning and design.

Purpose: This study aims to develop an audit tool for the micro-built environment of neighborhoods based on a child-friendly perspective that can be easily applied in community practice. It also intends to apply this tool in high-density living environments in Shanghai to identify spatial problems and provide planning guidance for the micro-built environment to promote fine-grained spatial governance in communities and create healthy, safe, and inclusive child-friendly communities.

Methods: In this study, a "Child-Friendly Neighborhood Built Environment Audit Technological System" was developed with the aim of facilitating its application in community practice. The audit objectives and principles were identified based on the consensus on child-friendly environmental features and child development and behavioral needs. The focus was on the construction of safe, healthy, and inclusive child-friendly communities. The audit scope was defined as the community level, with the audit targets being the micro-built environment elements of community streets, outdoor public spaces, and residential environments. This was based on the characteristics of child activities at home and abroad and the focus of child-friendly practices. Relevant audit checklists and on-site audit tools were developed based on the three principles, and the on-site audit methods and modes were clarified. The developed technological system was applied by conducting on-site audits in 131 community street sections, 60 outdoor public spaces, and 28 different types of residential environments in the Jiangpu Road Street area of Yangpu District, which covers typical residential areas in Shanghai. The feasibility of the developed technological system was tested by combining, summarizing, and visualizing the audit results.

Results: After conducting on-site audits from a child-friendly perspective, it was found that there is still a lot of room for improvement in the micro-scale built environment of the community. Taking street improvement as an example, section adjustments such as widening pedestrian and cycling spaces are important but come with increased implementation costs. Conversely, adding various child-friendly street facilities, such as traffic calming measures, child-friendly directional signage, and child-friendly crossing facilities, are more flexible and have a more prominent effect. The audit found that these are also important parts of the existing built environment that are missing. Similarly, taking outdoor public space improvement as an example, there is a general mismatch between "space" and "facilities" in the community. Compared to the past, the problem of scarce land resources for existing facilities is well recognized. In fact, the problem of insufficient children's play equipment in public spaces is also prominent, manifested as "having space but no facilities" or "having neither space nor facilities." By focusing on these important potential areas in child-friendly updates, the effectiveness of updates can be effectively improved and the sense of achievement for children can be enhanced in child-friendly communities.

Conclusions: The study developed a "Child-Friendly Neighborhood Built Environment Audit Technology System" that can be easily applied in community practice. The system can help communities concisely identify the problems of built environment elements most closely related to children and determine the priorities of renewal projects. The application of on-site audit in Shanghai showed that the system has application value in community space problem diagnosis and planning decision-making intervention. Updating flexible and microscopic community built environment elements, such as various facilities, is an important part of potential effective governance to improve children's sense of achievement.

Citations
WISDOM SPEAKS: EXPLORING PLANNING CONTRIBUTIONS TOWARD INDIGENOUS LANGUAGE REVITALIZATION
Abstract ID: 1284
Research in Motion (RiM)

STEVENSON, Dylan [University of Washington Seattle] dylste@uw.edu, presenting author

The dialogue surrounding the significance of Indigenous Knowledge(s) within the planning field has become more commonplace, particularly regarding practices within environmental planning, responses to climate change, and ecological restoration. Though the awareness of the interdependence between Indigenous Knowledge(s) and specific context has received increased attention, the role of Indigenous Knowledge has been heavily relegated to environmental and natural resource management (Hibbard et al., 2008; Nadasdy, 1999) with limited consideration of how these knowledge systems are reproduced and maintained within the norms of a tribal worldview.

Planning’s focus on indigenous knowledge systems has been primarily on its knowledge content and its relationship, application, and contributions to the ‘natural’ landscape to achieve joint Tribal-State aims. These planning endeavors are undoubtedly crucial in promoting cultural competency, tribal sovereignty, and self-determination within our current planning regime. But what about the knowledge holders?

I focus on exploring the relationship between Indigenous knowledge systems and the environment (natural or otherwise) by adjusting the foci from its content-based approach to a knowledge-holder using the lens of Indigenous language revitalization. It is well-known and documented that Settler-state governments such as the United States have institutionalized Indigenous language eradication through forced assimilation tactics (Newland, 2022). The consequences of these genocidal policies result in very few Indigenous language speakers who are oftentimes relied upon as keepers of Indigenous knowledge systems. With very few speakers, there are varying degrees of language transmission—and, by extension, knowledge transmission—occurring in Indigenous communities. If planning is ready to take on the task of working with tribal communities in joint planning projects, it needs to plan with the next generation of indigenous land stewards and protectors in mind. This project explores the contributions the planning field can make toward indigenous language revitalization beyond the scope of environmental management. It utilizes theories from Linguistics to inform how language, as a cultural practice that encapsulates Indigenous knowledge(s) and epistemologies, can be reinforced, and normalized within the environment to promote Indigenous language revitalization (McKenzie, 2022; Hussein, 2012). Other planning tactics, such as place identity and wayfinding, will be identified that planners could adopt in developing strategies that contribute toward the indigenous language revitalization movement.

Citations


Key Words: Indigenous Planning, Intangible Cultural Heritage, Language Revitalization

URBAN LAND-GRANT UNIVERSITIES ENGAGED IN NON-ADJACENT NEIGHBORHOODS: AN EXPLORATORY ANALYSIS OF NEIGHBORHOOD REVITALIZATION EFFORTS
Abstract ID: 1344
Research in Motion (RiM)

PARK, Seungbin [The Ohio State University] park.2897@osu.edu, presenting author

This research investigates two urban land-grant universities that make long-term engagement efforts for urban revitalization in non-adjacent neighborhoods. Many U.S. urban universities have undertaken engagement for urban revitalization in adjacent neighborhoods since the 1980s to address urban issues like unemployment, poverty, and housing. In particular, land-grant universities, with their mission and experiences to reach out to society, have been actively seeking new roles in responding to emerging urban issues. Universities recently started to extend their engagement to non-adjacent neighborhoods, making long-term investments in urban revitalization. While the rationale for engagement in adjacent neighborhoods has been studied by previous research, little is known about how they choose non-adjacent neighborhoods to be engaged in.

This research asks how urban land-grant universities decided to commit their long-term engagement to revitalization in non-adjacent neighborhoods. It focuses on two cases for a comparative study: The Ohio State University and the University of Minnesota Twin Cities. First, The Ohio State University and its medical centers partnered with the City of Columbus and the Columbus Metropolitan Housing Agency and initiated the Partners Achieving Community Transformation (PACT) in 2010 to revitalize neighborhoods in Near East Side, four miles from its campus. It pursues community redevelopment, commercial and retail development, a healthy community, education, employment opportunities, and inclusive decision-making processes. Second, the University of Minnesota initiated the North Minneapolis Partnership in 2005 with the City of Minneapolis, Hennepin County, the Minneapolis School Board, and the Minneapolis Park and Recreation Board. The North Minneapolis area includes neighborhoods in Near North and Camden, distressed communities that are, on average, four miles away from the main campus. The Partnership focuses on children and family well-being, education, economic development, and community-based organization.

A preliminary analysis of the American Community Survey shows changes in the neighborhoods involved regarding socioeconomic metrics such as demographic composition, economic activities, income, poverty, housing, and education. These findings and additional secondary data analyses that incorporate archival data will help readers understand how urban land-grant universities justify and make decisions about their long-term commitment to urban revitalization efforts. Therefore, this research is expected to add to the conversations as to common and distinct characteristics of neighborhoods in which universities choose to be engaged. In the practical sense, nongovernmental organizations working on urban revitalization would be informed about how universities make decisions in designing and implementing engagement. Future work will employ the before-after-control impact design to assess the causality between university efforts and changes in socioeconomic metrics.

Citations

Key Words: Community and Economic Development, University-Community Partnership, Neighborhood revitalization, Urban university, Land-Grant University

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**Track 2 Posters**

**ANALYSIS OF FUNCTIONAL LIVING ZONES BY SPATIAL TERRITORY FOR THE ELDERLY IN SEOUL USING MOBILE PHONE BIG DATA**

Abstract ID: 220
Poster

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The projected increase in Korea's elderly population from 17.5% in 2022 to 20.6% in 2025 indicates the country's transition to a super-aged society. This transition is occurring at a much speedier rate than in other OECD countries. On the other hand, the elderly have recently shown a preference for residing in city centers in order to maintain an active lifestyle as seniors. In addition, although the concept of a "pedestrian daily life zone" has emerged in the 2040 Seoul Urban Master Plan, there is insufficient research on the dwelling area of the elderly. The aging-friendly city policy requires an empirical analysis of the living area that clearly establishes the spatial unit and scope of travel for the elderly, considering their changing habits and utilizing objective travel information. Using mobile phone location-based big data and community detection techniques, the objective of this study is to establish a spatial hierarchy for the dwelling areas of the elderly and compare it to that of non-elderly individuals. Big data derived from the location of mobile phones were used to identify living zones based on actual traffic data. By identifying the actual movements of mobile phone users through the collection of communication histories between mobile phone terminals and base stations, this data supplements the low sampling rate limitation of traditional survey-based data. This study analyzed movement data from January 1, 2022, to December 31, 2022, within Seoul, South Korea, to determine the living zones of the elderly and non-elderly using spatial hierarchy. To differentiate between living zone hierarchies, movement data for the elderly (65 years or older) and non-elderly (20-64 years old) were analyzed, divided by origin and destination, and classified based on travel time. Travel time standards were categorized into four levels based on living area types: small-sized zones (under 15 mins), middle-sized zones (under 30 mins), large-sized zones (under 45 mins), and regional zones (total). For community detection, the infomap algorithm was used to derive and compare living zones by spatial hierarchy for each age group. The boundaries of residential zones for elderly and non-elderly individuals in Seoul did not correspond to the administrative districts. As the hierarchy of living zones increased, modularity decreased, signifying less mutual exclusivity between communities as a result of longer travel times and greater mobility ranges. The spatial hierarchy of living zones for the elderly had a higher total number and greater modularity than that of the non-elderly, indicating that the elderly have a smaller life radius and are more active within a specific community. This
study emphasizes the importance of considering connectivity with neighboring areas when planning living zones for an age-friendly city that addresses the challenges of an aging population. In addition, since the functional living zones of the elderly differ from those of non-elderly individuals, it is necessary to create distinct living zone plans for each age group. This study can serve as a foundation for the provision of city services, such as the arrangement of main facilities and the provision of senior transportation services.

Citations


Key Words: age-friendly city, functional living zones, mobile big data, network analysis, community detection

URBAN PARK USAGE PATTERN BEFORE, DURING, AND AFTER THE COVID-19 PANDEMIC

Abstract ID: 974
Poster

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Urban public spaces have played essential roles in environmental purification, social gathering, public health, etc. However, COVID-19, the global pandemic, affected the urban lifestyle and the usage of public parks. Many traditionally successful places are called into question for their effectiveness in providing needed areas for these traditional programs under pandemic-related circumstances. In this regard, this study discovers how the use of public places has changed before, during, and after the pandemic, with a focus on the local parks in the Golden Triangle Region – Starkville, West Point, and Columbus in Mississippi. Beginning with the literature review on urban parks and COVID-19, this study conducts human subject research. It uses an online survey and in-person interviews in the local parks as research methods (approved by the IRB Board: IRB-23-003). The use of a questionnaire survey is beneficial in collecting demographic and behavioral data to better understand the communities' feelings and usage patterns of public space before, during, and after the pandemic. With the answers of 86 respondents (63 survey participants and 4 interviewees, effective on April 1, 2023), the study determines a relationship between remote work and the duration of time spent at local parks and a connection between the presence of household members under 18 years of age and park usage patterns. Finally, usage and duration patterns are compared to survey responses about park usage behaviors after the COVID-19 pandemic to determine if there is a change in park usage or if it has reverted to original usage patterns. The interviews discover various personal experiences related to COVID-19 and their local parks. These findings aim to determine a positive correlation between work-from-home and park usage duration and activity. This research can be further developed to define a new function of urban parks regarding public health in a pandemic and to find new park programs and designs for future open spaces in urban areas.
Citations


Key Words: COVID-19, pandemic, urban park, social vulnerability, park usage pattern
Adaptation and mitigation to climate change takes work; however, in addition to the effort required to build new products and industries, there is also the need to consider the effects of climate change on new ways of performing work. Confronting challenges of and through work will be critical if we are to move more industries into a cleaner future, which means that the fate of our planet and the creative contribution of all workers living on it are intimately connected and interdependent. This preorganized session brings together a mix of emergent projects across multiple methodological traditions, all focused on the importance of work for anchoring resilience to climate change, inclusive of all working people. As a result, these papers speak to the need for layered and coordinated institutional efforts to transition to cleaner industries that both recognize the tenuous paths for connecting previously disparate knowledge and people, while also engaging inherited structures within existing industries that can add precarity to working conditions even as workers move in support of decarbonization.

Objectives:

- Explore effects of climate change on work and those performing it.
- Explore new data sources and methodological approaches to studying work in an age of climate change.
- Learn about layered institutional solutions that connect knowledge and people and also protect frontline workers as they move in support of decarbonization.

The ongoing energy transition has created a critical need for clean energy workforce development at scale. The need can be addressed by transitioning workers that are employed in other occupations, including carbon-based energy occupations, linking retraining to improvements in wages and job quality measures (Jackman and Moore 2021). Effective clean energy workforce development through retraining can be enhanced by targeting similar occupations, facilitating occupational transition on the basis of shared occupational attributes and a high degree of task familiarity (Gottfredson 1981; Dandridge and Richards 2010). However, the characteristics of clean energy occupations and occupations to be targeted for transition-supported retraining are unclear. An expanded understanding of those occupations can inform how the energy transition might shape labor market dynamics.
Previous research on clean energy workforce development through retraining uses direct comparison of clean energy jobs and other jobs based on education, skill level, and pay using curated datasets (Louie and Pearce 2016). By contrast, we perform a more granular analysis at the occupational level, leveraging a dataset of occupational similarity publicized recently in 2022, accounting for similarity in specific occupational attributes validated as relevant to occupational transition (Dahlke et al. 2022). These data allow us to posit the following questions: What are the characteristics of clean energy occupations? How can occupations be grouped meaningfully for transition into clean energy occupations? What are the characteristics of the occupations to be targeted? How might retraining workers for the clean energy transition influence labor market dynamics?

We identified 41 uniquely clean energy occupations among the 923 occupations with detailed descriptions in the Occupational Information Network (O*NET) database. While the energy sector requires cross-cutting occupations (e.g., accountants), we focus on occupations that are unique to clean energy work (e.g., rooftop solar installers). The identified clean energy occupations are largely technological in nature, requiring expertise in relevant mechanical, electrical, or industrial equipment. In addition, we identified 416 occupations in the O*NET database within the same major groups as identified clean energy occupations – creating a pool of occupations to identify and target for retraining.

Using a matrix of similarity scores – a degree of similarity between text descriptions – between three occupational attributes (knowledge, tasks, and alternate titles) among each occupational pair derived from ONET Relatedness Research Dataset, we clustered the pool of occupations. Unsupervised Partitioning on Medoids based on Gap statistic generated five clusters. The clusters contain clean energy occupations among other similar technical occupations and can serve as catchment for retraining. Two of the clusters contain 38 of 41 clean energy occupations: one with occupations that require a minimum of an Associate’s degree (e.g., engineers and engineering managers) and the other in which a high school diploma or equivalent is sufficient (e.g., operators and technicians). We supplement this cluster analysis with employment projections, wages, and vocational requirements from the Industry-Occupations Matrix published by the Bureau of Labor Statistics (BLS).

Our preliminary findings point to strong near-term opportunities to target retraining to workers in occupations that do not require a college degree. Clean energy occupations such as electrical line and maintenance and repair work display growing demand and higher relative wages, while their non-clean occupational counterparts pay less and are projected to decline. The same is not true for college-degree requiring occupations that are similar in scope to those in the clean energy sector, suggesting it will be much harder to motivate workers that have obtained a college degree to transition out of polluting jobs without providing additional benefits or incentives. Beyond validating the utility of occupational analyses using the O*NET database, this research offers broader implications for guiding national and regional workforce development.

Citations

Climate change is restructuring the relationship between the economy and material ecologies and as such is redefining jobs and livelihoods in fundamental and consequential ways. Current assessments of this relationship between climate change and work often focus on the numbers of jobs that will be lost or created in a green transition. But the creation or destruction of jobs is not the only work-related change that needs to be considered and better understood. Beyond these simple counts are a complex set of transformations to work that will accompany industrial responses to intensifying climate pressures and challenges—transformations not just in how work gets performed and in what locations, but in how workers will interact with one another and collectively experience and interpret their immediate material and ecological surroundings.

Workers across multiple roles and occupations—from the frontlines to the highest organizational levels—have insights to share about material properties and affordances in changing environmental contexts, including their in-situ use and design. Likewise, workers within and across workplaces can help anticipate and illuminate sources of risk and uncertainty, drawing attention to how they intensify as materials, along with broader industrial structures and regulatory contexts, continue to evolve and change. All of this and more requires focused attention on the situated and relational knowledge of workers, while also considering what is at stake for ongoing material improvement when processes of knowledge sharing and co-creation are undervalued or forestalled.

In this paper we draw to light the contribution of situated and relational knowledge to material use and adaptation. We do this through an illustrative case of low-carbon concrete—a suite of material innovations that offers the promise to decarbonize one of the most ubiquitous yet environmentally damaging human-made materials in use today. The production of cement, which is the binding factor in concrete, is the source of nearly ten percent of the world’s carbon dioxide emissions, releasing more carbon annually than any single country save China and the United States. Demand for cement and concrete continues to rise as cities expand their boundaries and increase in size. According to the climate advocacy group Architecture 2030, the global building footprint is set to double by 2060, adding floor area equivalent to present-day New York City each month for the next 40 years. Concrete use will support this urban expansion, also meaning that the path to decarbonization must run through its development.

Fortunately, innovative technologies now exist to reduce the carbon footprint from concrete-based construction by as much as 70 percent, while also transforming concrete structures into a carbon sink, enabling them to draw carbon dioxide from the atmosphere and turn buildings and bridges into the functional equivalent of forests. Still despite the clear promise these available technologies present, their adoption to date has been slow, marginal, even purely experimental.

In this paper, we explore this hesitancy to take up these material innovations through a mix-methods research design, inclusive of in-depth interviews with construction industry workers, worker organizations, building trades unions, and training institutions. In our interviews, we pay close attention to the challenges that construction workers encounter for sharing and deepening their knowledge of material properties and development. By also speaking with workers at project sites that involve low-carbon concrete mixes, we reveal the creative and collective ways they influence the development and deployment of low-carbon alternatives. With this research, our goal is to generate pragmatic and transferable policy recommendations for nurturing a material frontline workforce, that at once recognizes and bolsters the importance of their collective and continued engagement to
environmental and material innovation.

Citations


Key Words: worker knowledge, material innovation, construction, climate change, infrastructure

BUILDING A SUSTAINABLE FOOD SYSTEM WITH AND THROUGH CAREWORK
Abstract ID: 340
Abstract within Pre-Organized Session 33

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The food system is one sector of the economy that stands to change significantly to maintain a healthy and stable food supply in light of climate impacts. Yet, efforts to build a “green economy” are not gender or race neutral, and many green economy jobs are low wage (MacGregor, 2017). Gender is a salient but understudied lens with respect to sustainable food systems research specifically. Indeed, women are increasingly recognized as the innovators behind new, more sustainable food systems arrangements in popular media; research has documented how gendered work plays an important role in sustainable food work and food preparation at home (Bruce and Castellano, 2016), in schools (Gaddis and Coplen, 2018), and in restaurants (Sachs, et al., 2014; Jayaraman, 2016; Jayaraman, 2013). Unfortunately, much of this body of work also reflects how work that is feminized – also called “carework” to denote both nurturing and carefulness – is devaluated; differences in social-economic status and race exacerbate this further (Castellano, 2016). Two trends compound the potential for devaluation of work in sustainable food systems. First, new research documents the ways that the concept of carework has been extended to environmental considerations in farming (Shisler & Sbicca, 2019). Second, many sustainable food systems efforts are orchestrated or run by non-profits, community groups, and/or socially-minded enterprises, which often disproportionately employ women (Petzelka & Mannon, 2006).

Together, these dynamics present a puzzle. Is carework an essential, but undervalued component of innovation in sustainable food systems? As the current food system is increasingly recognized for its inequitable and unsustainable impacts, understanding how gendered work and carework manifest in the spaces beyond food service becomes an important, but understudied, area of research (MacAuley and Niewolny, 2016). To answer these questions, this paper asks, how does carework manifest in sustainable food systems? Is carework, regardless of who does it, undervalued? Does carework expand the roles, representation, and impacts, of sustainability work in AFS, or reproduce gender inequality and bias?

To answer these questions I adapt the computational social science method of sentiment analyses to analyze job advertisements in the sustainable food systems over the last decade. Rather than testing for positive or negative sentiment, I examine labor quality in the contexts of gendered language and appeals to sustainability. Specifically, by creating lexicons of words for gendered language and carework, including categories that enable an analysis of masculine language, I measure job advertisements’ incorporation of gendered work, and whether advertisements reveal gendered divisions of labor and compensation patterns. Similarly, I measure the extent to which job postings appeal to sustainability, and how this work is valued in terms of job quality. Finally, I explore the co-occurrence of appeals to sustainability and gendered work. This will help identify where and how appeals to
sustainability and gendered work play a role in sustainable food systems work, with important implications for green jobs policy that aims to support and expand climate resilience in agriculture.

Citations


Key Words: green jobs, gender, food systems, sustainability, carework

MAKING WATER WORK: EVALUATING DC WATER’S WATER WORKS PROGRAM FOR SUCCESSFUL PATHWAYS TO JOBS FOR UNDERREPRESENTED COMMUNITIES

Abstract ID: 531

Abstract within Pre-Organized Session 33

WILSON, Matthew [University of Illinois Chicago] mwilso25@uic.edu, presenting author

Water utilities around the US are facing difficulties in recruiting and retaining quality employees. These workforce challenges are especially problematic as roughly one-third of the water workforce will be eligible for retirement in a decade, raising concerns that there will not be enough certified operators (Meko, 2019; EPA, 2019). Evidence suggests that existing training programs for water related jobs have not been successful in recruiting younger talent (Meko, 2019; Kane & Tomer, 2018; EPA, 2019). The critical nature of the work performed by certified water operators in providing communities and businesses with water services combined with economic inequality stratified along racial and ethnic lines, presents an opportunity to implement workforce programs that serve the dual aim of training the next generation of workers to the water sector while helping to address economic inequality.

In this paper, we propose studying the District of Columbia Water and Sewer Authority’s (DC Water’s) Water Works Program, a local hiring initiative to develop successful pathways to jobs for underrepresented communities. DC’s Water Works Program is one of the most innovative water-related workforce development programs in existence. DC Water leverages this program to develop and implement pre-apprenticeships, other reduced-cost training programs for targeted populations, and wrap-around services. We discuss the history behind the creation of the Water Works Program, describe the robust engagement with local government agencies, contractors, and community-based organizations that would ultimately comprise of DC Water’s Strategic Partners, and provide an overview of the financial investments that were made by DC Water to implement the various training programs.

This paper would contribute to the literature on workforce development in two primary ways. First, the longevity of DC Water’s program makes it an ideal case study. Since the inception of the program in 2016, DC Water has successfully provided jobs for over 500 local residents. One of the program’s goals is to create approximately 100 new jobs for local and District of Columbia residents. Moreover, DC Water has set a target of seventy-five (75%) of new jobs created by contracts to be filled by local residents. Second, studying workforce development in the context of the water sector would offer much needed guidance to other water utilities across the country. This topic is particularly timely as the utilities across the country struggle with workforce challenges that are exacerbated by infrastructure challenges and the impacts of climate change. Moreover, the case of DC Water is...
particularly appealing because the socioeconomic context of the District of Columbia Water and its infrastructure needs are not too dissimilar from those of other large utilities across the country struggling with workforce development issues.

Citations


Key Words: Workforce Development

URBAN–RURAL DIVIDES AND IMPLICATIONS FOR PLANNING
Pre-Organized Session 50 - Summary
Session Includes 847, 848, 849

Increasingly, Americans view their country as divided politically, socially, economically, and culturally along geographic lines. However, these perceived divisions are not limited to the United States, but are a global phenomenon, influencing national economic development and sociopolitical dynamics throughout the world. This session considers the extant literature and current conversation surrounding geographical divisions, regional inequalities, and rural–urban relationships. Drawing from empirical research and analysis these papers question and challenge the conventional wisdom on geographical divisions and implications for planning.

Objectives:

- Understand the current literature on the urban rural divide
- Awareness of the domestic and international context
- Draw planning lessons from this new perspective

IS CONSUMPTION DESTINY? A STUDY OF FAMILY CONSUMPTION PATTERNS FROM 1999-2021 AND ASSOCIATED OUTCOMES ACROSS GENERATIONS AND GEOGRAPHY
Abstract ID: 847
Abstract within Pre-Organized Session 50

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Cities around the world have evolved from centers of production to those of consumption (Glaeser, Kolko, and Saiz, 2001). At the same time, consumer behaviors not only reveal socio-economic position of individuals and families but also determine their future status and intergenerational mobility through their educational and health care expenses (Currid-Halkett, 2017). Recent studies indicate that geography plays an important role in household consumption and lifestyle: where people live can influence consumer behaviors, their job opportunities
(Moretti, 2013) and their cultural capital and value systems (Wuthnow, 2019; Currid-Halkett, 2023). However, there have been relatively few studies examining the intersection between consumption and geography, and its implications on growing inequality and lack of upward mobility. This paper aims to address the research gap by examining consumption patterns among families with children across metros, urban/rural, and neighborhood types and its relationship with child outcomes two decades later (i.e., 2019-2021). In doing so, we primarily rely on the restricted version of the 1999-2021 Panel Study of Income Dynamics (PSID). The PSID is the longest-running longitudinal household survey in the world, collecting information on roughly 9,000 families and 25,000 individuals in the United States. The main data include detailed information on the demographic and socio-economic status of the nationally-representative families and their members. It was expanded in 1999 to collect additional information on household consumption from food expenditures to educational expenses. The restricted version of the PSID data includes geographic identifiers at the census tract-level, which enable us to analyze consumption patterns by metropolitan and then neighborhood status. We supplement the PSID data with others to control for metro/neighborhood characteristics. These data include Census 2000, 2009-2021 American Community Survey (ACS) 5-year estimates, and Consumption Expenditure Survey (CEX). The neighborhood characteristics are linked to each PSID family in each wave at either MSA or census tract level using the geographic identifiers from the PSID data. Using these datasets, we analyze consumption patterns in the 1999-2001 wave of families and children across metros and neighborhoods and then examine the association between the consumption patterns and future outcomes, focusing on their educational expenditures, and their labor and educational outcomes in the 2019-2021 waves. The findings of this study will deepen our understanding of the differences in family consumption patterns across metros, urban/rural areas, and neighborhoods, and how the gaps are associated with their child outcomes.

Citations


Key Words: Consumption, Consumer city, Urban-rural divides

THE OTHER URBAN TRANSITION: A CROSS-COUNTRY ANALYSIS OF “URBANIZATION FROM WITHIN” IN ASIA AND AFRICA

Abstract ID: 848
Abstract within Pre-Organized Session 50

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The urban transition has conventionally been imagined as “the depopulation of rural areas” (Davis & Golden, 1954) – with villages emptying as cities swell. However, emerging patterns of rural-to-urban transformation in the Global South unsettle this dominant assumption. Not only are rural settlements urbanizing in situ, but many of these transformations are occurring far from big city peripheries—suggesting they represent something other than metropolitan expansion (Mukhopadhyay et al., 2020). Research in India has characterized this process as “urbanization from within” (Randolph, 2022), given that urban growth in these locations is driven by natural population increase rather than in-migration, with demographic density preceding economic diversification away from agriculture. This trend suggests that the underlying mechanisms of urbanization may also differ from the expectations of canonical urban development theory, which views the emergence and expansion of cities as a
spatial consequence of industrialization and the in-migration of labor (Lewis, 1954). These findings point to a different context of urbanization—with demographic, economic and social dynamics that contrast with larger and industrialized settings—holding potentially profound consequences for planning in the 21st-century Global South (Randolph, 2023). This paper endeavors to expand the evidence of “urbanization from within” beyond the Indian context through a cross-country analysis of demographic, migration, and employment data. The analysis utilizes national census data in combination with the Global Human Settlements Layer, a harmonized measure of “degree of urbanization” developed by the European Commission. I show that population densification and employment diversification are prevalent across wide swathes of the Global South, including in Southeast Asia and Sub-Saharan Africa, in rural locations that are mushrooming through natural population growth. The findings demonstrate that “urbanization from within” is a common—though not universal—feature of contemporary urbanization in the Global South, holding major implications for both urban theory and urban planning.

Citations


Key Words: Urbanization, Rural-to-urban transformation, Demography, Economic change

RURAL AMERICA: DEVELOPMENT OR DECLINE? INVESTIGATING RURAL ECONOMIC DEVELOPMENT FROM 1991–2020

Abstract ID: 849
Abstract within Pre-Organized Session 50

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Deteriorating rural American economic conditions have received significant attention in the wake of the 2016 U.S. presidential election, in which Donald Trump rode a wave of white working-class resentment to the oval office. Much economic development research has substantiated urban dominance in the post-industrial period, describing a “Great Divergence” between global cities and the American heartland (Moretti, 2012; Storper, 2013). However, an alternative body of literature suggests that rural society is not as decayed as the popular imagination might believe (Crabtree, 2016; Lichter & Brown, 2011; Winchester, 2012). Our study contributes to this discourse, examining thirty years of employment data from BLS against changing OMB metropolitan and rural county designations. Our analysis indicates that the rural classification schema is biased against rural development, allocating dynamic rural growth away from rural economic statistics. Additionally, we identify evidence of rural job growth in productive knowledge-based industries, supporting existing findings of increasing urban–rural integration and interdependence (Lichter & Ziliak, 2017). Overall, our research indicates that narratives of rural decline are flawed: rural life has changed dramatically but is far from extinguished.

Citations

Key Words: Rural, Development, Economics, Metropolitan, Divisions

BRIDGING COMMUNITY AND ECONOMIC DEVELOPMENT IN PRACTICE
Pre-Organized Session 58 - Summary
Session Includes 882, 883, 884

This pre-organized session explores current challenges and opportunities for bridging the goals of economic and community development in practice. The case studies will investigate opportunities in small and mid-size cities, situate the challenges in the context of the urban-rural divide, use comparative frameworks within a single state to illuminate theory-practice gaps, and offer recommendations to sharpen the focus of planners and policymakers. Papers in this session examine the roles of anchor institutions, community redevelopment agencies, and economic development plans, with a focus on how these approaches can create pathways for equitable development practices.

Objectives:

• understanding challenges of bridging community and economic development goals

EQUITABLE ECONOMIC DEVELOPMENT IN SMALL AND MID-SIZED CITIES: POSSIBILITIES AND CHALLENGES
Abstract ID: 882
Abstract within Pre-Organized Session 58

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Studies of community and economic development in US cities often focus on large cities and economic hubs that surround them (e.g., New York City, Boston, and the San Francisco Bay Area). While not all large cities experience a process of “winner take all urbanism” (Florida 2017), one may argue that larger cities (e.g., Detroit) are still the focus of significant scholarly and philanthropic attention.

But how applicable are observations and best practices from such studies for the rest of the universe of cities in the US, particularly small and midsized cities (with populations between 50,000 to 500,000)? Locales that fall on the smaller end of this spectrum, such as smaller legacy cities as well as those not in proximity to larger ones, often lack the capacities available to their more well-resourced peers (Hollingsworth and Goebel 2017; NYU Langone Health 2020). This dynamic may exacerbate existing disparities in development activity, innovation, and technology between cities (Clark 2020) and present more challenges within locales that seek to promote a more equitable vision for planning and development (Loh and Kim 2021).
This disproportionate focus on large cities is often taken for granted in community and economic development research, and this oversight may result in economic development approaches ill-suited for the needs and on-the-ground realities of smaller and less resourced communities. This research offers findings that contribute to closing this gap, based on three interrelated research activities.

First, we present a typology of small and midsized cities in the US based on a cluster analysis (n=300) that acts as a foundation for our categorization; this work builds off existing public health research on small and midsized cities typologies. Second, we conduct a content analysis of economic development plans from a subset (n=45) of our sample, exploring common economic development practices as well as insights into how these cities attempt to promote equitable development and growth, if at all. Finally, we offer findings from semi-structured interviews with city leaders. Interviews cover topics that include, but are not limited to: community assets and access to resources; local, regional, and national partnerships; resident engagement; and equity initiatives.

Preliminary analyses indicate that many small and midsized cities continue to rely on traditional economic development tools (e.g., tax incentives) to encourage businesses to relocate to their cities. Further, many seek to draw talent and grow their tax base (despite continuous population declines in some locales), promote tourism, and improve downtown infrastructure to support the above-mentioned goals; in effect, many cities in our sample rely on “looking outwards” to strengthen their economies, leading to questions about who ultimately benefits from local economic development policies and practices in American small and midsized cities.

Citations


Key Words: Local economic development, people-centered economic development, community development, small and midsized cities

UNDERSTANDING ECONOMIC ANCHORS ACROSS THE RURAL-URBAN DIVIDE: IT’S MORE THAN EDS AND MEDS

Abstract ID: 883
Abstract within Pre-Organized Session 58

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Within a given region, most households and businesses are “footloose” entities, free to move within and across cities according to their preferences and perceptions of economic pressures and opportunities. However, there is a category of establishment with stronger ties to place, rooted in a community as both a beneficiary and contributor of its economic and cultural vibrance. These establishments – referred to as anchors – are often regarded by planners as local assets, providing stability, character, and development opportunities for the communities in which they reside. In this research, we review the existing construct of the anchor institution in the contexts of planning, public policy, and regional science. Next, we introduce a set of recommendations to expand the concept to be more inclusive of rural economies, private enterprise, and natural amenities. We conclude with a discussion.
of the challenges that planners must reckon with when interacting with anchors as both analysts and practitioners.

Citations


Key Words: Anchor Institutions, Community development, Economic development, Downtown development

COMMUNITY REDEVELOPMENT IN FLORIDA: FINDING SPACE FOR EQUITY
Abstract ID: 884
Abstract within Pre-Organized Session 58

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Since the 1970s, Florida, like many other states, has pursued revitalization of its disinvested places through community redevelopment agencies (CRAs). The Community Redevelopment Act of 1969 led to the establishment of CRAs in Florida, and amendments in 1977 and 1985 expanded their authority through tax increment financing (TIF) and greater local control (Delaney, 2004). These agencies represent an intersection of various types of development – community, economic, and real estate – combining a localized focus, with profit-oriented motivations and an emphasis on physical improvements that raise property values (Hill, 2023). The structure of CRAs as a type of public/private partnership and the use of TIF as a funding mechanism are clearly vestiges of neoliberal and entrepreneurial public policy approaches (Weber, 2002). Yet, case studies demonstrate that urban development projects like those supported by CRAs can be influenced by variable institutional and structural conditions and that public sector actors, elected officials, and marginalized groups can, at times, alter the market-orientation of these projects towards more equitable results (Kim, 2022).

In this paper, we seek a deeper understanding of these institutional and structural conditions through qualitative and descriptive analyses of CRAs in Florida. We ask: How are Florida CRA’s spending their revenue? What types of activities are being funded and who are the likely beneficiaries of these activities? What factors may explain the pattern of their expenditures? We deploy Hyra’s (2012) conceptualization of old vs. new urban renewal as an analytical framework for the case studies, examining how projects supported by CRA investments align with or diverge from (1) downtown preservation vs. expansion, (2) federal vs. global/federal/local influences, (3) race-based vs. race-and-class-based consequences, (4) institutionalizing urban “ghettos” vs. rising suburban poverty. We conduct a content analysis of annual reports and budget documents for 223 CRAs in Florida, to describe the landscape of revitalization across the state including how revenues are invested and types of projects funded. From this initial analysis, four case studies were selected for deeper examination of the decision-making processes and politics underlying the distribution of CRA funding and who is benefiting from these investments. Our preliminary findings suggest that factors contributing to expenditure patterns include the CRA board structure,
presence of a citizen’s advisory committee, and existing community organizing capacity. This work contributes to the growing body of planning research highlighting the institutional and structural conditions that can help nudge market-oriented development processes towards more equitable outcomes.

Citations


Key Words: Community redevelopment, tax increment financing, equitable development, urban renewal, urban revitalization

SEEKING SOLUTIONS FOR MORE INCLUSIVE ECONOMIC DEVELOPMENT PRACTICE
Pre-Organized Session 59 - Summary
Session Includes 412, 647, 648, 649

Entrepreneurship has received increasing scholarly and practice attention as the core driver of economy in the last decade. While entrepreneurship is ultimately an act of individuals, scholars are unraveling that a multitude of organizations and actors are involved in the environment, such as local government, anchor institutions, nonprofit support organizations, experienced entrepreneurs who serve as mentors, and other entrepreneurs who learn from each other as peer mentors. An emerging body of studies, including the past works by some presenters in this session, indicate that these broader institutional environments favor certain kinds of entrepreneurs, and disfavor other kinds of entrepreneurs, namely women and entrepreneurs of color. Yet, we still know little about how we can create a more inclusive environment for underrepresented entrepreneurs. The papers in this session deepen understandings about these institutional and structural issues, as well as policy and practice efforts to remedy the environment broadly related to entrepreneurship and economic development.

Objectives:

- Understand disparities among entrepreneurs

ON THE USES OF COMMUNITY LAND TRUSTS IN COMMUNITY ECONOMIC DEVELOPMENT: EXPERIENCES AND ONGOING EFFORTS IN NEW YORK CITY
Abstract ID: 412
Abstract within Pre-Organized Session 59

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While Community Land Trusts (CLTs) were not originally created as tools for affordable housing, for much of the past 40 years that has been their primary purpose (Defilippis, Stromberg, and Williams, 2018). Increasingly, however, CLTs have been broadening out their visions beyond housing; and CLTs are often now used to meet a
variety of community needs and interests. Included in those needs and interests is community economic development that is controlled by, and does not displace, the residents of the community. The growing uses of CLTs in community economic development has attracted the attention of practitioners, funders, and media that cover the community development field (Abello, 2023; Duranti-Martinez, 2022; Martinez, 2021; Shatan and Williams, 2020), but is yet to be fully engaged with by academics writing about either CLTs or community economic development. It is this gap that this paper will help to fill. It does so by asking the simple questions of: what are the kinds of community economic development plans and projects being done by CLTs?; is the CLT form (as opposed to any other form of land tenure and governance) important to those plans?; what are the constraints or barriers to the realization of these plans?; and to what extent (if at all) does the CLT enable or constrain the ability to overcome those constraints or barriers?

The paper begins with a discussion of the history of CLTs, how they work, and their uses as primarily a form of permanently affordable housing. It then discusses the commercial uses on CLTs in cities such as Anchorage, New Orleans, Minneapolis, and Los Angeles. The bulk of the paper will be about the commercial CLTs that are being created in New York City by organizations around the city. Particular focus will be placed on efforts in western Queens (Western Queens CLT [WQCLT]), the South Bronx (Mott Haven-Port Morris Community Land Stewards), and East New York, Brooklyn (East New York CLT).

The paper is based on my long involvement in the CLT movement in New York City. I am a founding member of the New York City Community Land Initiative (NYCCLI), which has been the organizing umbrella for the growing CLT movement there, and a founding member of the WQCLT. It will also be based on analyses of: organizations’ planning documents, local media accounts, government RFPs, and other sources. Finally, interviews will be conducted with staff, board, and steering committee members of the different CLTs to discuss their community economic development plans, and the role that the CLT form plays in those plans.

Citations


Key Words: CLTs, community development, New York City

REGIONAL ECOSYSTEM OR SEGREGATED ECOSYSTEM?

Abstract ID: 647
Abstract within Pre-Organized Session 59

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We have long known that minoritized populations lag in entrepreneurial activities. Research at the personal and individual levels indicate minoritized entrepreneurs experience lower startup rates, lower firm survival rates, and
have a more difficult time accessing entrepreneurial finance. These difficulties make it more likely that minoritized entrepreneurs will become discouraged and less likely to pursue opportunities to support their firms. Recently, new studies are emerging to uncover why such a gap exists by analyzing how elements of entrepreneurial ecosystems such as incubators and other forms of support organizations may design programs for a specific group of entrepreneurs (primarily Caucasian male) that unintentionally exclude. In other words, there is growing evidence that regional economic systems can promote entrepreneurial activities for certain demographic groups and exclude others. Our paper contributes to the debate on the causes of divides between entrepreneurs of different racial groups by adding spatial analysis between locations of support organizations and demography within a local entrepreneurial ecosystem.

Our case is the core, 11-county region of metropolitan Atlanta, a rapidly growing region with high concentrations of African Americans, historically underrepresented groups, and of newly arriving groups of Hispanics and Asians. We identify more than 390 entrepreneurship support organizations with street level address and conduct spatial analysis with Census data. Our preliminary analysis reveals heavy concentration of support organizations in wealthy and white neighborhoods, and even those support organizations specialized to provide services to minorities are located on the edge of minority areas. While we do not make a simplistic assumption that entrepreneurs use only nearby support organizations, the strategic locational choice by each support organization and hence the concentration of many of them in limited neighborhoods provide skewed services and access to minority entrepreneurs. Our findings therefore have implications for how support organizations, which are often supported by public funds may be better spatially planned for maximum benefit to minoritized groups.

Citations


Key Words: minority entrepreneurship, entrepreneurial ecosystem, spatial analysis, entrepreneurial support organizations

EVERYONE COME TO THE TABLE: A CASE STUDY OF A COMMUNITY-BASED EFFORT TO DIVERSIFY SUPPLY CHAINS AT LOCAL SAFETY NET HOSPITALS
Abstract ID: 648
Abstract within Pre-Organized Session 59

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In January of 2023, a team of researchers from CUNY Hunter College and their partners at the Brooklyn Communities Collaborative (a consortium of East and Central Brooklyn safety net hospitals) presented the results of participatory research action (PAR) conducted with Black entrepreneurs in Central and East Brooklyn, NY. One of the issues that had emerged from the PAR was the need for a critical mass of local leaders who could identify
pathways to success for local Black-owned businesses and support their participation in the anchor institutions' supplier diversity processes. To this end, the partners created the Brooklyn Health Enterprise Advisory Council. Council members are local leaders who emerged during the PAR process. They represent diverse intermediaries dedicated to supporting local Black-owned businesses: community development financial institutions, local development corporations, business assistance providers, and a Business Improvement District. They are experts, advising Black business owners, helping them build competencies, and guiding them through the M/WBE certification process, which establishes the companies as capable of providing goods and services for local institutions.

This paper will assess the Council’s first nine months of operation (January-September, 2023). As co-participants in the effort to design a more supportive infrastructure for Black entrepreneurs in Central and East Brooklyn, the researchers will employ participant observation and interviewing to track the Council’s progress and determine whether and how the involvement of trusted local actors enables business owners to build their own capabilities as suppliers, make connections to anchor representatives, and pursue contracting opportunities. Researchers will also observe anchor institution representatives both to learn about the conditions under which they effectively engage with Black-owned enterprises and to understand ongoing institutional barriers to supply chain diversification.

Our hypothesis is that a group of engaged, neighborhood-embedded intermediaries will prove effective in catalyzing more inclusive procurement practices among safety net hospitals and in promoting greater preparedness and capacity among enterprises aspiring to join their supply chains. This in turn has the potential to stimulate job creation and the circulation of local dollars and to contribute to the well-being of the communities where Black-owned businesses operate. While limited to a single case, this study will lay the groundwork for comparative case analysis and perhaps future cross-sectional research on supplier diversity initiatives.

Citations


Key Words: Black entrepreneurship, supplier diversity, community development, local economic development planning, anchor institutions

NAVIGATING ASSISTANCE NETWORKS: RACIAL DIFFERENCES IN ENTREPRENEURIAL ECOSYSTEM STRATEGIES AND PATHWAYS

Abstract ID: 649
Abstract within Pre-Organized Session 59

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Scholars and policymakers have increased their level of attention on entrepreneurship as an important driver of urban and regional growth and innovation. One thread of this dialogue is a focus on inclusive and equitable entrepreneurial ecosystems.

Entrepreneurs from historically marginalized groups have experienced higher closure rates, lower sales, fewer employees, and lower profits than white-owned firms (Fairlie and Robb 2008). While a great deal of research has focused on the entrepreneur and their individual characteristics to explain racial differences, more recent studies focus more on the ecosystem and the interaction between the entrepreneur and the broader network of institutional stakeholders, including entrepreneurial support organizations (ESOs).

ESOs play a critical role in helping entrepreneurs access resources and information to start and grow their businesses (Motoyama, 2015). ESO configurations range from service providers and traditional incubators to more recent manifestations, including accelerators, maker spaces, and rental spaces. Evidence is starting to emerge documenting how entrepreneurs from historically marginalized groups face barriers to accessing services offered by some ESOs, including geographic barriers, weak social networks, and unattainable requirements, among other factors. This study asks three key questions: 1) Where do entrepreneurs turn to for resources, information, and guidance? 2) What are the differences in patterns among historically marginalized entrepreneurs (Black and Latino) compared to white entrepreneurs? 3) How do these groups' perceptions of local ESOs and assistance more broadly differ?

This study is part of a larger mixed-methods community-engaged three-year research project that is following forty Black, white, and Latinx entrepreneurs from through the Richmond, Virginia, ecosystem for a year using weekly diaries. We also interview entrepreneurs every other month to gain more in-depth knowledge on targeted topics. Finally, each participant took part in four-focus groups around topics including networking, barriers, and support. We explore the various paths entrepreneurs take in establishing and growing their businesses, paying particular attention to where they turn for assistance, the barriers they face, and where they receive resources and information comparing minority groups to their white counterparts. By coding diary entries, interviews, and focus group transcripts for key themes, we aim to understand the differences in assistance engagement patterns and perceptions of opportunities for assistance for each group. We also use logistic regression analysis to understand how demographic, industry, and business-related factors that influence the likelihood of seeking assistance and how the influences differ across race.

We find that long-standing structural barriers impede both access to resources and assistance as well as perceptions about entrepreneurial opportunity structure for business owners from historically marginalized groups. We also find distinct racial differences in awareness of available resources. Inequity in social and professional networks play a tremendous role in uneven levels of engagement in the ecosystem both in terms of the variety of connections and depth of relationships. Despite the challenges of navigating the Richmond entrepreneurial ecosystem, we find a determined and resilient group of passionate and innovative entrepreneurs. Entrepreneurship has been touted as a potential tool for economic growth, job creation, and poverty alleviation. To achieve inclusive and sustainable economic growth, support, and resource must flow through and reach all corners of the ecosystem. It is simply not enough for resources and support to exist. Local planners and policymakers have a responsibility to build social and economic spaces that are both accessible and welcoming to all entrepreneurs. This includes targeted resources and services, international outreach, and authentic connectivity.

Citations

Key Words: entrepreneurship, race, ecosystem, support organizations, networks

Track 3 Roundtables

PREVENTING SMALL BUSINESS DISPLACEMENT IN GENTRIFYING NEIGHBORHOODS: LESSONS FROM COMMUNITIES IN THE U.S. AND BEYOND
Abstract ID: 505
Roundtable

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Small businesses are vital to the social, cultural, and economic health of neighborhoods, particularly low-income communities of color. They foster community connectedness, provide local employment opportunities, connect residents to local goods and services, and allow a community’s dollars to remain in and improve their neighborhoods. Small businesses are also highly vulnerable to displacement when neighborhoods gentrify.

Policy debates and research about gentrification have focused mostly on residential gentrification. Far less attention has been paid to commercial gentrification, the process by which long-term businesses that provide products and services to established residents are forced to move or close and are replaced by establishments that cater to more affluent consumers. When established neighborhood small businesses are displaced, it affects residents who have relied on them for goods, services, employment, gathering spaces, amenities, and social capital.

Given their long history of segregation and disinvestment, urban neighborhoods that are home to communities of color and immigrants are most likely to gentrify. The consequences for small neighborhood businesses owned by Black, Indigenous, and people of color (BIPOC) and immigrants, especially those that rent their space, can be devastating. These businesses are particularly vulnerable to displacement because they do not have the same resources or privileges as incoming businesses, which are often larger and White-owned. BIPOC- and immigrant-owned businesses face greater lending discrimination and landlord exploitation and have less bargaining power than White-owned businesses. They have fewer capital resources and are often highly affected by economic
downturns because of credit constraints and narrow operating margins. They have less access to training and technical resources and are often unaware of or face various barriers to accessing local, state, or federal resources. Due to historical and ongoing discrimination, they also tend to have less personal wealth that they can leverage to maintain or grow their businesses.

This roundtable will address strategies that communities throughout the U.S. and internationally have adopted to mitigate commercial gentrification and prevent small business displacement. It will draw on the expertise of researchers associated with the Small Business Anti-Displacement Network (SBAN), a national network of organizations that work to prevent the displacement of BIPOC- and immigrant-owned small businesses in gentrifying neighborhoods.

Panelists will address a wide range of innovative efforts being employed in diverse communities. They will discuss the findings of SBAN’s Small Business Anti-Displacement Toolkit, which was developed through a national survey of anti-displacement tools and strategies—from form-based codes and local hiring initiatives to community land trusts, tenant protections, and commercial property ownerships. Panelists will also discuss detailed case studies of efforts by public, private, and nonprofit organizations to preserve small businesses. This will include discussions about the effectiveness of hawkers’ unions in preventing the displacement of informal street vendors in India and efforts to establish cultural districts to slow the commercial gentrification in the largely Puerto Rican neighborhood of Chicago’s Humboldt Park. The panel will share lessons for scholars and practitioners on how to advance promising anti-displacement policies and practices within and beyond their metropolitan areas.

Citations


Key Words: commercial gentrification, small business displacement, BIPOC- and immigrant-owned businesses, urban redevelopment, case studies

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Track 3 Individual Paper Submissions

REINFORCING THE ROLE OF OLDER INDUSTRIAL CENTERS? THE CASE OF INNOVATION IN THE US RUST BELT

Abstract ID: 91
Individual Paper

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This paper explores innovation activities in traditional manufacturing between 1976 and 2014 in the US Rust Belt. Urban decision-makers and regional scientists have long recognized that innovative industries significantly facilitate a region’s economic development in the knowledge era. Most contemporary scholarship regarding innovation-led development centers around a few emerging high-tech industries, such as IT and life sciences, and a few growing regions, such as Silicon Valley and Boston (Saxenian, 1996). By contrast, the less-innovative traditional manufacturing seems to fade away from the public and academic lens, or even be excluded from policy-making, for these industries are thought to precipitate much employment decline and urban shrinkage and associated social problems in the Rust Belt (Wiechmann & Pallagst, 2012).

Canonical economic development theories, such as endogenous growth theory (Romer, 1986), could be a possible root of these policy choices and public perceptions. According to these canonical theories, the level of output/income a region achieves, the population it attracts, the "technological intensity" of the industries it specializes in (usually measured by STEM jobs), and the knowledge (especially patented innovation) it produces can reinforce each other. These mainline development theories represent the current rationale of growth-oriented development: a region can thrive in every dimension in a knowledge economy by advancing any one of those dimensions. By the same token, a retreat in any of those dimensions most often indicates the same in the others.

Nevertheless, recent scholarship argues that the economic development and restructuring of older industrial regions is much more complex than these canonical explanations allow. For instance, some urban shrinkage scholars have started to challenge the equivalence between economic advancement (or industrial restructuring) and population gain after looking into older industrial cities in developed countries (e.g., Hartt, 2018). Recent empirical studies find that some US Rust Belt regions remain as innovation hotspots of traditional manufacturing even after their production activities and population declined (e.g., Hannigan et al., 2015). However, further effort is still needed to test the generalizability of these results.

Using regression analyses and primarily US Patent and Trademark Office (USPTO) patent data, this study tests the hypothesis that regions with higher original patenting levels in manufacturing sectors experienced greater patenting growth in those sectors from 1976 to 2014. This study further investigates the economic factors that have led to those sustained innovation activities by testing two sub-samples of regions experiencing population loss and economic decline during the study period. The findings first show that innovation often persists even when regions experience population and economic decline. Nevertheless, the persistence of innovation is reduced by regional population decline. Second, this study argues that large traditional manufacturers may be responsible for the lower innovation performance of some Shrinking City or Rust Belt regions.

In conclusion, this study suggests that for many older industrial regions, abandoning traditional expertise in favor of pursuing high-tech industries may not be the most efficient use of resources. Instead, regions could integrate their existing industrial strengths into their regional revitalization strategies. For instance, besides designating industrial parks that solely attract and incubate high-tech start-ups, governments can identify and support competitive traditional corporations or clusters that are capable of investing in advanced technologies. Policymakers may also consider minimizing the potential adverse impact of large, or possibly monopolistic traditional firms on the regional innovation atmosphere. This study also advocates for further research to explore the interactions between major economic factors, such as innovation, productivity, and population change, which canonical development theories have not yet thoroughly explained.

Citations

WHAT INFLUENCES REGIONAL GENDER WAGE GAP IN THE US?
Abstract ID: 93
Individual Paper

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Wage inequality between male workers and female workers is an important aspect of gender inequality and has existed for a long period. Over the past decades, the gender wage gap has been observed as falling not only in Europe but also in the US and Canada due to women’s better performance in higher education as well as rising labor force participation. However, gender inequalities in the labor market are still remarkable. Causes of the gender wage gap have been divided into two categories: supply-side causes (gender differences in human capital characteristics such as worker’s education attainment, occupation and skills) and demand-side causes (discrimination in labor market, provisions and policies, regional characteristics). As one of causes of the gender wage gap, regional differences have not been paid the same attention as others. Analyzing the spatial pattern of the gender wage gap and identifying potential regional characteristics may generate new answer to gender inequality. This paper focuses on the gender wage gap at metro level and explores what regional characteristics may be related with the gender wage gap and how they are associated. Results show that cities with larger population and more establishments may have narrower gender wage gap; cities with more foreign ownership business may have larger gender wage gap. Thus, making cities more attractive for people and economic activities may be helpful for reducing regional gender inequality.

Citations


Key Words: Gender wage gap, Metropolitan statistical area, Human capital characteristics, Regional factors

DISCOURSES ON URBAN EXPERIMENTATION: AN INVESTIGATION OF PORTLAND’S DIGITAL CITY TESTBED THROUGH Q METHODOLOGY
Abstract ID: 114
Individual Paper

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This study aims to analyze discourses on urban experimentation networks and inclusiveness. Currently, urban experimentation is prevalent in cities around the world (Arntzen et al., 2019). Urban experimentation refers to geographically based experiments that utilize science and technology to address social issues by connecting actors from different sectors, such as living labs, testbeds, and social innovation. Some scholars have argued that urban experimentation may reinforce and legitimize the existing order of regional innovation (Clark, 2020; Evans, 2016), while others see it as a shift away from traditional innovation that has led to exclusion and inequality (Hafkesbrink & Schroll, 2011; Menny et al., 2018). Furthermore, inclusive urban experimentation necessarily demands the rearrangement of power in order to include previously excluded actors in the system (Moulaert & Mehmood, 2011). Accordingly, urban experimentation requires critical scrutiny by examining the discourse dynamics of actors in its networks. This paper aims to examine the potential conflicts in the urban experimentation networks, by examining the differences in the discourses on 1) the inclusiveness and 2) the challenges of the urban experimentation.

This study employs the Q methodology to understand the dynamics of urban experimentation discourses. Q methodology, which couples qualitative and quantitative methods, uncovers patterns of discourse formation around a topic by revealing structural differences in cognition between groups (Barry & Proops, 1999). Q methodology allows researchers to gain insights into the perspectives of different stakeholders for unstructured issues, where the problem boundaries are not well defined like urban experimentation (Cuppen et al., 2016). By doing so, Q methodology can also be useful for practitioners in resolving conflicts and developing effective strategies for collaboration. Q sorting and interviews will be conducted with 30 actors who participated in urban experimentation networks in Portland, Oregon. The Digital City Testbed Center, established by Portland State University, connects local governments, companies, communities, and a technology association to address accessibility and climate change issues (Fink, 2020).

Based on a literature review, we develop a Q-set with 27 statements from four themes: institutions, networks, technology and knowledge, and inclusiveness. Q statements regarding institutions are created based on recent studies examining how existing regional innovation systems (RIS) work for urban experimentation (Isaksen et al., 2022; Tödtling et al., 2022). Q statements on networks consider network size, intensity, local embeddedness, and intermediaries of networks discussed in previous urban experimentation studies using the Quadruple Helix model and collaborative network theory (Galego et al., 2022; Nguyen & Marques, 2021). This study includes technology-related statements, considering development stages and interoperability of technologies used for urban experimentation in relation to regulations on the technology (Claudel, 2020). Lastly, statements on inclusiveness from the aspect of opportunity, process, and results distribution are included. We use the PQ Method program to cluster participants who sorted statements in statistically similar ways, revealing structural differences in perceptions between discourses. We then interpret the results of the factor analysis by combining the results of the quantitative analysis with data from interviews and surveys.

The findings of this study demonstrate discourse dynamics in urban experimentation networks in Portland. Firstly, this study reveals how actors’ perceptions of urban experimentation in terms of institutions, networks, technology, and the perception of inclusiveness may differ depending on respondents’ sectors. We expect that actors from private sector will form a distinctly separate discourse from actors from the community, while governments and universities will construct a more balanced discourse as mediators. By clarifying the differences in discourse between actors, we expect to be able to anticipate potential conflicts that hinder the inclusion of urban experimentation networks and draw policy implications for what is needed for more inclusive urban experimentation.

Citations


Key Words: urban experimentation, collaborative network, inclusiveness, Q methodology

UNBOXING THE POLITICAL ECONOMY OF WAREHOUSE DEVELOPMENT IN CALIFORNIA
Abstract ID: 128
Individual Paper

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The urban periphery has become the physical site of the “logistics revolution”. Improvements in technology and the rise of e-commerce has transformed the global production and consumption network (Alimahomed-Wilson, 2019). Under the logistics revolution, the location of distribution warehouses is critical to reducing the time that goods spend travelling between the factory and the consumer. The urban periphery is well placed to accommodate warehouse development because of the availability of land, physical connections to port facilities and access to a ‘large reserve of army’ of cheap exploitable labor (De Lara, 2018). Regions located on the urban fringe occupy peripheral spaces of power – between the urban and the rural. These regions suffer from a lack of economic influence compared to urban agglomerations embedded in the global knowledge economy (or regional divergence, see Moretti, 2013; Storper, 2013), and a lack of political influence compared to rural areas which are favored in federal politics (McGahey, 2022 refers to this as anti-urban bias). Relying on warehousing as the major industry of employment places these regions on a particular economic development pathway and the level of agency that these regions have over their economic future remains in question.

In this paper, I explore the political economy of warehouse development across two regions in California – the Inland Empire and North San Joaquin Valley. These two regions are situated on the urban fringe of California’s two largest metropolitan areas, Los Angeles and the San Francisco Bay Area. Concerns regarding the environmental and health impacts of warehouse development on disadvantaged communities has been growing within these regions, and intervention in the planning process has occurred at both the local and state government levels. Since 2020, several cities in the Inland Empire have introduced temporary moratoria on new warehouse development and the California Attorney General has recently directed the City of Stockton to consider development standards which mitigate the impact of future warehouse development. Community groups have been lobbying Gavin Newsom, the Governor of California, to introduce a one-to-two-year moratorium on warehouse development across the Inland Empire. At the same time, developers, business coalitions and some politicians have been pushing back on these bans, citing economic arguments including the impact it could have on regional tax revenues, “good paying” job opportunities for the local community and national supply chains.

Specifically, I consider how urban-peripheral regions resist extractive industries, and what other economic development pathways are available to these regions. Through a review of archival documents, current media articles and policy documents, and semi-structured interviews, I identify the role of multiple levels of government and interest groups in shaping the regional economies of the Inland Empire and North San Joaquin Valley and the narratives which are deployed to influence warehouse development outcomes. I find that environmental justice and economic interests are largely positioned in opposition to each other. Planning policy has been leveraged as a
mechanism for resistance which sits detached from economic development policy. The perspective of warehouse workers, who are in many cases are also residents, remains largely hidden, despite being critical to understanding these tensions. This study makes a valuable contribution to broader debates regarding who has the power to shape regional economic development policy and who does not.

Citations


Key Words: local economic development, warehouses, logistics clusters, regional divergence, political economy

INTER-REGIONAL INCOME INEQUALITY AND ECONOMIC DEVELOPMENT IN THE U.S.

Abstract ID: 137
Individual Paper

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Ever since the seminal work of Williamson in the mid-1960s, there has been a long tradition of studying the dynamics of regional income inequality in the U.S. In this paper, we begin by re-examining intra-state (regional) patterns of income inequality using the latest county-level income data from the Bureau of Economic Analysis (over the 1970 to 2020 period). Results from a series of OLS, spatial and panel regression models confirm that regional inequality started to rise in the 1980s with a significant uptick in regional inequality throughout the early 1990s and 2000s. This rise in regional inequality appears to have slowed down in the late 2010s. Kuznets' standard inverted-U shaped curve linking lower inequality to higher levels of economic development thus appears more like an alternating cycle or wave where spatial inequality increases again despite higher incomes. To shed new insights on these spatial dynamics, we use directional local indicators of spatial association to track changes in the spatial configurations of the regional distribution of incomes (both across and within U.S. states). Different trajectories of change are identified, characterized mainly by a greater spatial polarization of incomes across certain regions of the country.

Citations

Key Words: Inter-regional income inequalities, Economic developments, Spatial error models, Directional LISA methods

ANTICIPATING RESILIENCE OF COMMUNITY-BASED SMALL BUSINESSES UNDER ENVIRONMENTAL SHOCKS
Abstract ID: 161
Individual Paper

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Coastal metropolitan cities have a large quantity of community-based small businesses (CSBs) located in the storm surge planning zone compared to chain businesses, which could alter the composition of businesses in the event of a flood. However, local development projects/plans in many coastal cities are still encouraging commercial developments in flood-prone areas due to their significant commercial benefits (Guo & Wang, 2022). As climate change increases either the frequency or intensity of extreme climate and weather events (Machlis, et al. 2022), the exposure of CSBs will increase and their vulnerability can be exacerbated by the ineffective spatial planning related to land use and transportation. However, the prevailing research on businesses and hazards has mainly investigated the recovery of CSBs after low-probability, high-damage disasters, as well as factors contributing to business vulnerability and failures (e.g., Marshall & Schrank, 2014). Additionally, the extant studies on resilient and adaptive spatial planning have focused on housing and residential land uses (e.g., Al Rifat & Liu, 2022). Less attention has been paid to economic development and community economic centers such as CSBs (Dua et al., 2020). As such, there is a lack of basic research that takes all the interactive spatiotemporal factors across businesses, communities, built environments, and hazards to explain and model for resilience of CSBs. Thus, this study proposes to “rewrite” the spatial econometric interaction model by designing and calibrating a place-specific Graph Attention Network-Long Short-Term Memory model. The calibrated model can be used to anticipate short-term resilience patterns of changing demand under environmental shocks. It has the potential to be used with new planning strategies through further community engagement. The research advances the understanding of CSBs in community economic development and an AI-assisted scenario planning framework.

Citations


Key Words: climate adaptation, deep learning, resilience, small businesses, urban modeling

WHO BENEFITS FROM WORKING IN BIG CITIES? SORTING, LEARNING, AND SOCIAL INEQUALITY ACROSS U.S. CITIES
Abstract ID: 209
Individual Paper

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One of the most consistently observed relationships in urban economics and economic geography is a strong, positive relationship between the size of a city-region and its workers' wage and salary incomes. However, recent research suggests this "urban wage premium" varies substantially across race, independent of other individual and urban characteristics, thus contributing to higher racial inequality in larger cities.

Theories of agglomeration hypothesize 3 potential channels through which the overall size and density of a city-region might generate higher wages for workers. First, more productive workers might simply sort into larger cities (sorting effects). Second, workers may experience a one time static increase upon locating to a larger city, for instance because firms in larger cities are more productive and pay higher wages, or because the greater number of jobs may improve the matching of workers into jobs that suit their qualifications (static effects). Finally, workers may have higher wages in larger cities because they are able to accumulate more valuable skills and experience in such locations (dynamic learning effects).

Using data from the National Longitudinal Survey of Youth, in this paper we first show that increasing urbanization within cities is related to disparate changes in wage and salary income across race and gender. We then then show that the ability of workers to accumulate and leverage big city experience varies substantially across race, making big city experience less valuable for Black and Latinx workers than it is for White workers. Finally, we provide evidence of racialized disparities in job matching that interact with city-size. This research makes an important contribution to our understanding of the drivers of higher levels of social inequality in bigger, denser cities.

Citations


Key Words: racial inequality, urban wage premium, sorting, learning, agglomeration

PROMOTING RESILIENCE AMONG ASIAN AMERICAN OWNED SMALL BUSINESSES IN NEW YORK CITY AFTER COVID-19 PANDEMIC

Abstract ID: 210

Individual Paper

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This study focuses on the role of social capital in the resilience of Asian American-owned small businesses in New York City after the COVID-19 pandemic. Despite the significant contributions of Asian American-owned businesses to local economic growth, their disaster recovery experience has not been extensively studied, and recent studies suggest that they have faced racism and social stigma and received less financial assistance and policy attention than other groups. This study aims to examine the extent of, forms of, and uses of social capital in Asian American-owned business recovery and to explore the opportunities and challenges of cultural and racial factors that facilitate or hinder social networks and solidarity toward building business resilience.

The study will involve face-to-face, semi-structured in-depth interviews with 20-25 Asian American business owners through a snowball sampling method. Thematic content analysis will be used to analyze the data and
identify key themes such as trust and reciprocal relationships, the role of a sense of belonging in recovery decisions, networking activities, and use of group membership, and factors related to culture and heritage.

The project will focus on understanding the importance of cultural and ethnic contexts such as trust, norms of reciprocity, the sense of belonging, network structure, and cultural beliefs during the recovery process. The findings of this study can help disaster planners and policymakers design policies that consider all the resources Asian American-owned businesses have to facilitate recovery and promote diversity and inclusion in the disaster recovery process.

Citations


Key Words: Asian American owned small business, COVID-19 recovery, Social capital, Cultural practices

CHILD CARE ACCESS ACROSS NEIGHBORHOOD TYPES: IMPLICATIONS FOR POLICY AND PLANNING

Abstract ID: 298
Individual Paper

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Child care is a lifeline for working parents whose labor market participation often is contingent on finding safe and high-quality care for their children. However, a growing body of research suggests that formal child care—both family child care homes and child care centers—is in short supply and fails to meet the demand for care. The child care supply dwindled further during the COVID-19 pandemic when many child care centers closed their doors due to low enrollments, high costs, and staffing shortages.

Studies show significant variation in the supply of formal child care across neighborhoods that vary by a number of different characteristics: race, income, and location. Some of this variation can be explained by differences in preferences for formal care. However, it is difficult to explain revealed behavior based only on demand, since many households experience supply constraints due to price, quality, and availability that limit their options and consequently depress their use of formal care.

Researchers show a scarcity of child care centers in rural areas. However, we hypothesize that child care supply also will be limited in outlying suburban areas, largely due to their dispersed urban form combined with underdeveloped social infrastructure. To test this relationship, we draw on data from the California Department of Social Services on child care facilities—both child care centers and family providers. We use a 2-step floating catchment area (2SFCA) method to calculate child care access: child care capacity relative to the potential demand for care defined as the number of children less than five years old. We then predict child care access as a function of three groups of factors: demographic, employment, and neighborhood type—urban (mixed use, old urban, urban residential), suburban (established suburb, patchwork suburb, new development) and rural.
Similar to other studies, child care access in California was lowest in Latinx and rural neighborhoods. Additionally, as we predicted, child care access also was low in the state’s newly developed suburban areas, home to a quarter of all children under five in the state. Our findings suggest the importance of policies targeted to centers and families located in outlying areas. These include the allocation of public child care subsidies based on the true costs of providing care rather than the market price as is the current practice. Child care centers could benefit from business assistance to help with licensing requirements, professional development and training, and other aspects of running a small business. Finally, the findings indicate the need for improved transportation services tailored to accessing destinations in dispersed environments.

Citations


Key Words: child care, accessibility, 2-step floating catchment area (2SFCA), neighborhood type, suburbs

EXPLORING THE LOCAL IMPACTS OF UNIVERSITIES ON SOCIOECONOMIC CHARACTERISTICS AND HOUSING MARKETS IN CANADIAN CITIES BETWEEN 1981 AND 2016: THE CONTRIBUTION OF SPATIAL PANEL MODELS

Abstract ID: 311
Individual Paper

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Universities in North America have played a critical role in promoting the economic development of cities and regions since the 1960s. To use universities’ financial and technical resources for the benefit of the local community, particularly in areas that have experienced economic decline, “anchor institution” models have emerged in planning and policy. Universities contribute significantly to the economies of their communities as large employers and major purchasers of local goods and services, compounded by their role in attracting students as a consumer market and labor pool. Recent emphasis on the “knowledge economy” has led to growth in postsecondary enrollment, and the expansion of new and existing university campuses.

However, recent literature has also highlighted the negative consequences of universities’ presence. University-led urban revitalization may displace disadvantaged residents within neighborhoods, resulting in gentrification (Baldwin, 2021). The concentration of students and young adults in university neighborhoods is further compounded by the prevalence of rental housing and the availability of numerous services. These urban transformations can result in rising of rents, and displacement of other populations and a physical decline (Smith,
Existing research on the impact of universities on urban development and neighborhood transformation has focused on case studies over short time periods, using only cross-sectional data (e.g. Moos et al., 2019). However, this approach may not provide a comprehensive understanding of the complex and dynamic relationship between universities and urban development. Alternatively, spatial panel models allows the examination of spatial and temporal variations in this relationship across multiple regions and over longer time periods (Gaboriault-Boudreau et al., 2019).

This study aims to provide an empirical foundation for understanding universities’ impact on the urban system by examining trends at the national level and employing a consistent methodology. We use spatial panel models to determine the effect of universities on the evolution of local housing markets and socioeconomic characteristics over time, across all census metropolitan areas (CMAs) in Canada, using Census-tract level data from the 1981 to 2016 Censuses and 2011 National Household Survey. Specifically, we focus on four dimensions that have been previously used in research on gentrification, studentification, youthification, and other processes of urban change: 1) the housing market, 2) population age, 3) social diversity, and 4) education and employment.

We find that there is a statistically significant relationship between socioeconomic indicators and university proximity in large CMAs between 1981 and 2016. Rent costs, the proportion of the population aged 20 to 34, and the proportion of those with at least a bachelor’s degree are all higher closer to universities. Although there appears to be a relationship between university proximity and the percentage of immigrants, the results are not statistically significant. The lack of statistical significance for medium and small CMAs could be attributed to the relatively small sample size in these areas, which may reduce the power of the statistical analysis, or due to the potential impact of different local economic conditions or land use policies in these regions.

This research demonstrates that at least some urban impacts of universities can be observed across the urban system and are not confined to individual case studies. Higher rents and a concentration of student-aged residents across the panel suggest the exclusion of other populations. Identifying these exclusions can aid planners in the development of more inclusive cities and more equitable university-community relationships. This work also makes a methodological contribution through its use of spatial panel models, which have many advantages over cross-sectional approaches. Planning scholars conducting longitudinal research can apply the methods presented in this study to a variety of problems.

Citations


Key Words: Anchor institutions, Urban revitalization, Gentrification, Housing markets, Spatial panel models

CENTERING WORK: MANUFACTURING EXTENSION AS A WORKFORCE INTERMEDIARY
Progressive policy efforts to support urban manufacturing have long focused on the workforce needs of small- and medium-sized manufacturers, whose small scale and precarious placement in global supply chains regularly fuels a vicious cycle of low wages, segmented labor markets, “skills gaps” and low productivity. Workforce intermediaries have intermittently sought to intervene on these dynamics, with an eye toward reconciling firm success with goals of improving job quality and workforce inclusion. The potential for Manufacturing Extension Partnership (MEP) centers to serve as workforce intermediaries remains underexplored. MEP centers are part of a federally funded national network that has existed since the 1990s, but where interest in workforce development has waxed and waned over time.

In this paper we examine the workforce service activities of MEP affiliates using administrative data on MEP client projects dating back to 2011. We analyze trends and patterns of project activity across the MEP network, finding significant variation in the extent and character of workforce project activity over time. We analyze the relationship between workforce services and other categories of MEP service activities, such as “lean” manufacturing and advanced technology adoption, as well as firm/industry and local labor market characteristics to assess patterns in the level and types of workforce services provided. We find that centers’ mix of service activities cluster in distinct ways, but that economic and geographical factors are relatively weak predictors of center workforce activity. Additionally, using keyword-based analysis of project descriptions for a sample of centers, we analyze specific types of workforce service activities, enabling us to distinguish between conventional modalities of workforce engagement such as training and recruitment, and progressive “workplace development” approaches that emphasize job quality, worker engagement, organizational learning, and diversity, equity and inclusion. Here we find stronger evidence of a relationship between progressive MEP workforce orientation and local institutional factors, such as the presence of manufacturing-oriented workforce intermediaries.

We conclude that MEP centers are likely to grow in importance as workforce intermediaries, but the directionality of their impacts on worker outcomes will remain contingent on center expertise and orientation toward job quality and inclusion goals, as well as their network connections with other local workforce, innovation, and supply chain intermediaries committed to those progressive goals. This connection to intermediaries is important because of the difference in spatial scales of state-based MEP centers and the local/regional scale of economic and workforce development planning efforts. For planners interested in supporting both urban production economies and inclusive labor market outcomes, MEP centers represent a critical institutional partner.

Citations

DISTRIBUTIVE ECONOMIC IMPACTS OF THE BIPARTISAN INFRASTRUCTURE LAW: A CASE STUDY OF TEXAS APPLICATION THE COMPUTABLE GENERAL EQUILIBRIUM (CGE) MODEL

Abstract ID: 407

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President Biden signed in 2021 the $1.2 trillion Infrastructure Investment and Job Act (IIJA) into law (also known as Bipartisan Infrastructure Law or BIL). The law authorizes $350 billion in new federal spending through fiscal year 2022 to 2026 on transportation, broadband, and utility infrastructure. Each state receives formula-allocated funds and can also request additional support through competitive grants. Based on the formula allocation, Texas will receive $36.3 billion for improving highways and bridges, public transportation, and airport and water infrastructure, expanding the electronic vehicle charging networks and broadband network, and increasing resiliences to wildfires and cyberattacks. However, it is unclear how these new jobs will distribute over the heterogeneous geography of the United States. Variations in industrial structure, labor characteristics, and the built systems across states and regions likely lead to varying levels of economic and job impacts of the formula funds. Local and regional economies are interrelated; they specialize in different industrial activities, complementing and competing with each other for production input and market demand. Infrastructure facilities such as highways, bridges, rail networks, and air and water ports exist and operate ununiformly across communities. Furthermore, people of different incomes, races, and ages (labor force participation) spread unevenly across counties and regions. Hence, positive external shocks such as BIL investment do not guarantee positive gains for all local economies, communities, and population groups. A question of important equity concern is how the BIL spending may affect spatial inequality, closing or widening the gaps between urban and rural counties, between large metropolitan areas and small-/medium-sized communities, and among various demographic groups.

This study aims to understand the potential distributive economic impacts of the BIL through case study of Texas. The study takes an ex-ante approach, applying the TERM-USA, a customized general equilibrium model, to account for inter-county, inter-regional economic dynamics. Based on the 2020 census demographic data used to calibrate the social impacts, the study assesses the estimated BIL investment impacts across different types of communities and various population groups and draws policy implications for advancing spatial and social equity.

The results show that most of the 254 Texas counties will likely enjoy positive impacts measured at about a 0.1-0.3 percent increase in employment and a 0.1-0.6 percent increase in value added. Counties in metropolitan areas are expected to have significantly higher GDP increases than non-metro areas. Greater percentage increases in unskilled job opportunities are observed in rural counties than in urban counties. Nevertheless, there are signs of possible increases in geographic disparity associated with the BIL investment. The modeling results show that ten counties could experience GDP loss, and 54 counties suffer from employment loss, which could be attributed to regional competition and uneven productivity among the counties. Findings from the study suggest that state and regional agencies and local communities should develop supplementary strategies to produce more equitably distributed outcomes amid major federal spending.

Citations
RESISTING THE SUBURBAN RETROFIT: KEEPING IMMIGRANT-OWNED BUSINESSES IN PLACE IN A GENTRIFYING SUBURB

Abstract ID: 521

Individual Paper

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The “rebirth” of cities comes at a cost. A grim cost that has accrued as the racialized revaluation and reclamation of urban land for the interests of state and private capital has remade more and more cities across the globe. The blunt impact of this process in the U.S. has been an abiding conversation among urban scholars. From early debates about slum clearance and urban renewal to contemporary gentrification, much has been written about new office towers, sports stadiums, upscale condominiums, and trendy boutiques. These narratives speak to the processes of gentrification in its historic and present forms that escalate land values and push Black and Brown residents and businesses out of central city neighborhoods. They inform a history of shameful policies, intentional disinvestment, underinvestment, and forced removals that violently stripped residents of their economic assets and political power. The process strips residents of their social connections, sense of place, and even their lives.

Communities have shown staggering strength and resilience in the face of such organized, state-sanctioned assault. Anti-displacement movements in New York, San Francisco, and other large urban centers, have been the subject of well-documented efforts to claim what the Marxist philosopher Henri Lefebvre called “a right to the city”—the right to remain in the city and benefit from new urban investments.

Much of the discourse about gentrification, however, emerged from studies of major cities. Studies that helped to conceptually define gentrification—the factors that contribute to it, how communities are impacted, and how they organize in response—have largely focused on the central city. For some scholars, gentrification’s very definition relies on its urban location. Suburbs, it might seem, add little new understandings of gentrification processes and politics.

This paper investigates the process that gave rise to calls for equitable development in Wheaton, Maryland, a suburb in the Washington, DC region. As county-led redevelopment took hold, the fate of many small, largely Latinx-owned enterprises that define Wheaton’s “downtown” as well as the residents they serve was thrown into question. Rising property values were coupled by an influx of young professionals who helped drive the downtown’s booming new residential market that raised the prospects of gentrification and the displacement of many small, immigrant-owned businesses. Community-based organizations, residents, and businesses also came together to fight for their right to remain.

This case study documents the efforts of suburban organizers to hold the line on large-scale redevelopment. In doing so, it shows the rise of a generation of new suburbanites that was different than their old school suburban activists that dominated previous generations of suburban redevelopment politics in the region. Unlike their old
school counterparts, the interests of these residents were not simply in historic preservation or protecting their sylvan middle-class communities. They were intertwined with keeping Wheaton diverse and its “funky” multicultural character intact.

This paper demonstrates the successes and challenges of these new school suburban activists in pushing new tools and policies to stem commercial displacement. It shows how grassroots leadership from below allied with political and grassroots leadership to make significant strides towards an equitable development agenda. But Wheaton activists also struggled with persistent suburban organizing challenges, including the constrained capacity of community-based nonprofits, political underrepresentation, and a still limited policy toolkit.

The paper makes clear the uneven costs and benefits of suburban redevelopment and how communities most likely to bear the weight of suburbia’s transformation have tried to balance the scales by asserting a more equitable stake and place in their suburban futures.

Citations


Key Words: gentrification, redevelopment, suburb or suburban, small businesses, anti-displacement organizing

LOCAL CLIMATE POLICIES AND THEIR IMPACT ON GREEN EMPLOYMENT GROWTH

Abstract ID: 534

Individual Paper

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This study investigates the relationship between green employment and climate policies in the U.S. states and localities between 2005 and 2020, utilizing financial incentives and regulatory policies as independent variables. Additionally, the demographic analysis reveals that 75% of green job workers are male, with female green job workers enjoying a significant wage premium compared to other jobs. From a racial and ethnic perspective, White non-Hispanic workers dominate the green job market with a 70% share and enjoy a higher wage premium in the green economy. By analyzing fixed effect models and distributed-lag models, the results demonstrate that local policies generally have more consistent positive effects on green employment than state-level policies. Furthermore, the research suggests that local-level policies play a crucial role in promoting green job growth and overall employment within their jurisdictions. In particular, Building Energy Code, Energy Standards for Public Buildings, Green Power Purchasing/Renewables Portfolio Standard, Loan Program, PACE Financing, and Property Tax Incentive contribute significantly to increasing the number of green jobs. The study also finds that policy measures are more effective in increasing medium-skill green employment, which only require high-school diploma or associate degree.

Citations


Key Words: Green Job, Economic development, Local policy, Equity

VIRAL CASH: PANDEMIC AND THE DIFFUSION OF BASIC INCOME TRIALS
Abstract ID: 541
Individual Paper

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Since the onset of the Covid-19 pandemic, more than 100 U.S. localities have established basic income demonstration projects (Mayors for a Guaranteed Income 2023). Program evaluations consistently identify a laundry list of benefits for basic income recipients, who work more, complete more education, pay off debt, have better health, participate more in public life and spend more time with their kids (Hasdell 2020; De Wispelaere, Halmetoja, and Pulkka 2019). Yet basic income programs test political feasibility as readily as they do the immediate effects of cash payments. This second, shadow set of experiments consists of techniques for building popular support to finance ongoing cash payments at scale. Evaluating these techniques begins with taking into account the role of the Covid-19 pandemic in building political and fiscal support for cash programs (De Wispelaere and Morales 2021; Warner, Kelly, and Zhang 2022).

This paper draws on an inventory of basic income pilot programs and completed interviews with more than 110 policy entrepreneurs active in basic income advocacy to ask how the origins of basic income trial programs affect their subsequent expansion. I focus on two key axes of difference within basic income programs, institutional oversight and target populations. Each factor influences the long-term viability of basic income programs in previously unnoted ways.

First, as the Covid-19 pandemic required fast action and limited conventional political deliberations, basic income trials developed under heterogeneous and often bespoke administrative arrangements, with individual programs running out of mayors’ offices, economic development authorities, municipal equity offices, private foundations and newly created not-for-profits. Here, field data indicate that programs run through municipal equity offices and private foundations display stronger connections to community organizations and advocacy coalitions.

Second, time-limited and modest funding forces implementing agencies to transform the idea of universal basic income into “guaranteed” basic income for trial populations varying from the unemployed, to the working poor, to single mothers, to residents of high-poverty zip codes, to artists, immigrants and the homeless. These varying program foci lead to substantive differences in the themes, messages, measurements and policy problems coupled to basic income programs.

I illustrate the impact of these differences through a comparison of basic income demonstrations currently
operating in the neighboring cities of Minneapolis and St. Paul. Minneapolis’s top-down basic income program runs through a municipal economic development office with limited connection to community organizations and political constituencies. By contrast, St. Paul’s program, administered by the city’s newly created Office of Financial Empowerment, has seeded spin-off basic income trials run by grant-funded community organizations. These differences point to the highly uneven and still incomplete impact of the contingent and idiosyncratic conditions under which each municipality first adopted basic income during the pandemic.

Citations


Key Words: Basic income, Urban politics, Covid-19 pandemic

ARE BARS AND RESTAURANTS CATALYSTS TO SUSTAINABLE PUBLIC FINANCE AND LIVABLE CITIES?

Abstract ID: 573
Individual Paper

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This explorative study provides a unique concept to measure the economic power generated by bars and restaurants as a potential economic catalyst to sustainable public finance as well as to goals of livable cities with vibrant neighborhoods. The concepts of sustainability and sustainable development have recurring applications in disciplines that examine the dynamics of urban and rural spaces such as urban planning, biology, health science, etc. but not how real estate development is a driver on economic development with hospitality retail in mixed-use developments. Urban development defines the built environment and livable spaces in cities long term with impacts on society and quality of life.

This work identifies characteristics and attributes that are associated with real estate key performance indicators and a new measure for Hospitality/retail real estate use (bar & restaurants) in the urban and ‘regional’ fabric of the metropolitan region of Austin, Texas. In determining the differences in environmental characteristics between locations which are high performing under this measure and those that are underperforming, this study developed a geospatial model to investigate the spatial influences between neighborhoods.

Past research related to alcohol in the urban setting emphasizes (only) on liquor stores as alcohol outlets and stores’ impact on society (i.e. crime, violence, noise and disturbances), or the effect on groups of select demographics such as age, race or ethnicity, or location of impact (rural vs urban) [1, 2]. Some of the reviewed work included spatial components such as density of outlets or the proximity to alcohol outlets [3].

To be specific, a performance measure showing dollars generated in taxes per square foot by a specific establishment category (bar, restaurant) at a specific cluster could lead future development policy by developers and cities, when considered as a) tax income source for local or state government, or b) as future development strategy influencing urban renewal strategies or new mixed-use decisions [4].
This research includes approximately 1,800 locations in Austin, TX invited for an online survey and the study proposed aggressive over ‘inviting’, and participation incentives, to increase completed responses for statistical and geospatial analyses.

The research answers to three overarching goals such as Goal 1: To identify characteristics and attributes that are associated with real estate key performance indicators for bars and restaurants, Goal 2: To determine the differences in environmental & societal characteristics between locations which are high performing under this measure and those that are underperforming and Goal 3: To investigate geospatial patterns and spatial influences between neighborhoods of Austin, TX using Goal 2 findings.

In doing so, the presentation includes the results of the survey and new composite measures expressing the productivity of a bar or restaurant. For example, dollars generated in taxes per square foot by a specific establishment category and style at a specific location/cluster could present future development strategies and an understanding of ‘critical mass’ of establishments in for example in the relation of size to tax dollars generated and what are their differences. This relationship is not documented in prior work on alcohol outlets.

The study is funded by the 2023 research seed grant award of the Huizenga College of Business and Entrepreneurship.

Citations


Key Words: Hospitality/retail real estate, Taxes, GIS, Performance innovation, Mixed beverages

AN EMPIRICAL ANALYSIS OF KEY INNOVATION DISTRICT FEATURES: A STUDY OF THE BEST PRACTICES IMPLEMENTED IN THE UNITED STATES

Abstract ID: 577
Individual Paper

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Innovation is widely considered one of the most powerful ingredients for spurring both productivity and economic growth (Yigitcanlar et al., 2020). Accordingly, urban models that can support innovative activities have become a critical focus for planning and policymaking over the past two decades, paralleling the important transition from an industry-led to a knowledge-intensive economy (Powell & Snellman, 2004). Many US cities are in the hunt for strategies that promote innovative endeavors capable of attracting both investment and a sophisticated workforce (Hamidi & Zandiatashbar, 2019; Powell & Snellman, 2004). The result has been a variety of urban models. Among them, innovation districts (IDs) stand out as principal guides to urban development policies and tools for urban planners and urban economists (Katz & Wagner, 2014).
A wide range of scholarly studies discuss ID typology, place-based qualifications, economic impacts, success stories, and their role in enhancing city attractiveness to firms and investors (Engel et al., 2018; Katz & Wagner, 2014; Yigitcanlar et al., 2020) but the literature tends to be theoretical or based on a few observations. The multidimensional nature of innovation districts, however, points to the value of systematic, empirical analyses for teasing out the primary factors shaping innovation districts and identifying commonalities and differences in how these factors play out in real-world cases. To the best of our knowledge, there is little such analysis.

This study bridges this gap and tends to support both practical and academic thinking about innovation districts by laying some groundwork necessary for a general understanding of major innovation district attributes. It adapts a framework drawn from our review of scholarly literature to pinpoint key features of fourteen established innovation districts in the United States. Accordingly, this study aims to understand 1) What are the driving significant factors that contribute to forming innovation districts? 2) What are the commonalities between IDs through an empirical study of innovation districts, and 3) What are the potentials and challenges for a thriving innovation district and how we can generalize the innovation district model (Lessons learned from best practices)?

This study incorporates qualitative analyses of fourteen innovation districts in the United States to explore the driving forces and primary factors in ID formation. It offers a comprehensive framework for innovation districts taking into account existing theoretical and empirical evidence and best practices. One finding of particular interest is that innovation districts clearly favor diversity of industry types and venture sizes, presumably because that is perceived as conducive to sustainability, but at the same time the anchor institution likely to be a university or a medical campus significantly affects the character of a district as specializing in certain sectors. Our results will help local actors—city officials, planners, and policymakers—better understand their local potentials and challenges and make informed decisions about plans and policies as they attempt to realize the ID concept in their cities or implement these developments into their urban areas.

Citations


Key Words: Innovation Districts, Innovation Districts’ Features, Placed-based Characteristics, Governance Structure, Case Study Analysis

THE GEOGRAPHY OF TELEWORK IN THE UNITED STATES AND IMPLICATIONS FOR PLANNING

Abstract ID: 589
Individual Paper

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Background and Research Questions: The past decade has seen a remarkable increase in people working remotely, driven by advancements in Information and communications technologies and evolving job structures. The COVID-19 pandemic has further accelerated this trend, prompting important questions about the geography of telework. Recent studies have identified trends and effects of remote work on particular industries or regions (Alexander et al., 2021; Ozimek, 2020, 2021a; Yang et al., 2022). Telework has been demonstrated to have the potential to reshape working relationships, impact job-related well-being, and reduce commuting times for employees (Felstead & Henseke, 2017; Ozimek, 2021b; Yang et al., 2022). The existing literature also records that the increasing popularity of telework has relocated labor and economic activities from the most expensive metropolitan areas to more affordable regions in the United States (Ozimek, 2021a). Moreover, planners have been facing new challenges created by the telework trend regarding housing, transportation, land use, and economic development (Zenkteler et al., 2022). However, there is a lack of a comprehensive investigation that delineates the geographical distributions and characteristics of telework in the United States.

To fill this gap, I answer the following four fundamental questions in this study: (1) Where are teleworkers predominantly located? (2) What factors are associated with regions with higher concentrations of teleworkers? (3) Which industries and occupations have higher rates of teleworking? And (4) what changes have occurred in the sociodemographic characteristics of teleworkers?

Methods: To answer these questions, I investigate the spatial patterns, occupational factors, and socioeconomic characteristics of telework at various geographic levels, including state, metropolitan area, and county, both before and after the COVID-19 pandemic. The study draws upon multiple national aggregate-level and individual-level datasets, such as the American Community Survey, the Household Pulse Survey, the Public Use Microdata Sample, the Survey of Income and Program Participation, the Zillow Housing Data, and the housing and transportation affordability index. I compare statistics extracted from the above datasets for the years 2019 and 2021 and highlight the distributions in maps and diagrams. To further gain a deeper understanding of the geographical characteristics of telework, I estimate multilevel regression models to explain the change in teleworkers associated with sociodemographic factors, the built environment, and land use.

Results: The results confirm a significant rise in telework across almost all metropolitan areas in the post-COVID era. More importantly, the analysis reveals spatial and social disparities in teleworking across the United States. These disparities are associated with a variety of factors such as income, race and ethnicity, educational attainment, population mobility, the concentration of industries and occupations, housing value, housing and transportation costs, residential density, and employment density. Overall, the results demonstrate the new norm of telework across the country.

Policy Implications: The findings provide valuable policy and planning implications that help adapt to the new norm of telework. First, understanding the spatial characteristics of telework enables planners can aid in predicting the travel demand and traffic for work-related activities, allowing planners to make informed decisions regarding transportation systems. Second, the analysis sheds light on the potential impact of telework on housing and land use, identifying the residential preferences for teleworkers. Third, the study provides policy implications for economic development relevant to workforce training programs, telework spaces, and information technology infrastructure. Finally, the study also calls for policies to mitigate the adverse effects of prevailing telework, such as stress, decreased productivity, and health risks.

Citations


Key Words: Telework, COVID-19 pandemic, Telecommute, Economic development, Information and communications technologies

Abstract ID: 639
Individual Paper

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Universities are often celebrated for their positive contributions to urban and regional development, with the potential of large “anchor” institutions to reverse the fortunes of some neighbourhoods attracting particular attention (Ehlenz, 2018). While universities make real contributions, some of these may be overstated in popular discourse. Others may be counterbalanced with negative impacts, increasingly identified in scholarly literature, associated with the displacement or marginalization of nearby low-income and racialized populations who will receive little direct benefit from the university’s presence. Neighbourhood-level socioeconomic changes may take the form of increased concentrations of students and young professionals, as well as more generalized processes of gentrification and housing market transformation. However, existing research documenting these impacts has typically focused on single case studies or small non-representative samples of cities – rapidly growing college towns (Foote, 2017), economically stagnant “legacy” cities (Revington et al., 2023) or large global cities (Moos et al., 2019), for instance. It is therefore uncertain to what extent these processes are generalizable across the urban system, and as a result, unclear what types of urban change planners should expect proximate to higher education institutions.

Using temporally consistent census tract boundaries from the Canadian Longitudinal Census Tract Database (Allen & Taylor, 2018), we compare socioeconomic indicators in university-adjacent tracts with the rest of the urban area, over the period 1981-2016, in all Census Metropolitan Areas (CMAs) and tracted Census Agglomerations (CAs) in Canada. We focus on 20 indicators related to four themes drawn from existing literature, namely the housing market; the age composition of the population; the social diversity of the population; and the educational and employment characteristics of the population. Results are stratified by large, medium and small urban regions, since the dynamics of urbanization may differ between these regions, and large CMAs may mask differential tendencies in smaller CMAs due to their sheer number of census tracts.

We find that in university-adjacent tracts, while some indicators such as average dwelling values are largely indistinguishable from the remainder of the similarly sized urban areas over time, others follow the same general trends but at a different level. For example, in large and medium-sized urban areas, the share of the population identified as belonging to a “visible minority” has consistently increased in both university-adjacent and non-adjacent tracts, although this share is statistically significantly higher in proximity to universities. Others still, such as the share of the population aged 20-24, 25-34 and over 65, diverge from overall trends. Moreover, some patterns differ between urban regions of different sizes. Small cities, in particular, saw considerable changes in university-adjacent tracts after 2001 along multiple dimensions, including sizeable increases in the populations aged 20-24 and 25-34 despite an overall decline or stagnation of these demographics, and increases in the share of
recent immigrants and holders of bachelor’s degrees.

These results provide planners and policymakers with a clear picture of the types of impacts that might be expected due to campus expansions. While recent scholarly and public debate has both promoted anchor institutions as a driver of local economic development and cautioned against their undesirable side effects, our findings shed light on which positive outcomes are most likely (or not) to expect, and which negative impacts should most realistically be feared (or not). This provides a basis by which to set expectations regarding anchor institution-driven urban development, and to identify where planning and policy interventions may be required to depart from overarching trajectories of urban change. Notably, both prevailing tendencies and university impacts may differ depending on the size of the urban area in question.

Citations


Key Words: anchor institutions, universities, neighbourhood change, gentrification, economic development

HOW INDUSTRIAL TRANSFORMATION AFFECTS THE EVOLUTION OF URBAN SPATIAL STRUCTURE IN GLOBAL CITIES? A CASE STUDY OF SHANGHAI, CHINA

Abstract ID: 657
Individual Paper

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Industrial transformation is an important force to reshape urban spatial structure, and an appropriate industrial layout helps improve the quality of economic development. To achieve the goal of “global city”, Shanghai is actively promoting industrial transformation and developing high value-added productive service industries, which lead to a significant impact on urban space and people's life.

Therefore, this study aims to explore the evolution characteristics of the urban employment center system in the post-industrial era. The results help to understand how the industrial transformation led by production service industries affects the spatial reconstruction process and provides theoretical support to guide market forces in optimizing the industrial layout.

This study focuses on Shanghai, China, which has played an important role in China's participation in the globalization process. With large-scale industrial transformation and rapid spatial reconfiguration, Shanghai has developed from a regional economic center to a global city. The data sources are from the third economic census in 2013 and the fourth economic census in 2018, which is the most authoritative economic data officially released by the National Bureau of Statistics of China, used to quantitatively measure the employment center system by the
size and type of jobs. The relative threshold method was used to identify urban employment centers and changes of their spatial distribution. The size-position order method was used to measure changes in the degree of urban polycentricity. And the geographically weighted regression was used to verify that different industry types contribute to the generation of employment sub-centers at different locations.

The study finds that the total number of employment centers in Shanghai increases under the background of industrial transformation. The new employment centers, dominated by productive services, are concentrated at the periphery of the downtown areas. Meanwhile, some manufacturing-oriented employment centers in the suburbs show signs of receding. The degree of employment polycentricity in Shanghai has increased, as shown by the rising influence of sub-centers. The geographically weighted regression confirms that the secondary industry contributes to the emergence of employment sub-centers in distant suburbs, while employment sub-centers promoted by productive services are closer to the periphery of the downtown areas.

The study reveals the impact of industrial transformation led by productive service on urban spatial structure, which provides empirical support for other developing countries to promote industrial transformation and optimize industrial layout. The subsequent study might further explore the differential distance effect of different industry types on promoting employment sub-centers and analyze the mechanism of generating employment sub-centers.

Citations


Key Words: Urban Spatial Structure, Employment Center System, Industrial Transformation, Global City, Shanghai

REFRAMING REGIONAL ECONOMIC RESILIENCE FOR COOPERATIVE REGION

Abstract ID: 734
Individual Paper

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Regions are affected differently by various socio-natural shocks, from natural disasters to economic crises. The process of overcoming these shocks also varies according to the socio-economic structure of the region. After rapid economic growth in the 1980s, Korea has experienced widening regional disparities. This makes regions more vulnerable to external shocks and regional inequality is spatially fixed and structured. The consistency of this trend raises an obvious question: How can regional inequality be improved sustainably? One of the answers recently emerged in the field of planning is resilience. The purpose of this study is to derive a regional economic resilience model that can detect and adapt to various shocks, and to establish a cooperative resilience region to revitalize the
rural areas. In this, regional resilience refers to the capacity of certain regions to prepare, resist or adapt to shocks that affect the core elements of the regions, residents, and their activities. This study examines regional economic resilience by dividing it into two dimensions. First, the residents dimension is measured by employment and population. Employment represents the performance of local labour market, and the impact of shocks is initially and more pronounced in the labour market than output. Population is a proxy for defining the robustness of the labor market conditions. This is also suitable for application in rural areas where the number of employees is too small to overestimate the changes in resilience. Second, the enterprises dimension refers to the degree of local productivity investment and is complementary to the residents dimension. It consists of capital productivity and the gross operating surplus share of national income, which means the dynamics of aggregate demand and technical efficiency and income distribution. We then apply three multimodal resilience metrics to examine the recovery process of the three indicators aftershocks. It consists of instantaneous resilience for the meaning of rebound of engineering resilience, and overall and average resilience for the meaning of hysteresis of ecological resilience. Finally, cooperative resilience region is established with low resilience areas and a cooperative regional economic model is applied to these regions. Exploratory spatial data analysis showed that low resilience areas were spatially dependent and exhibited spatial clusters. They are also relevant for cooperative action as they share similar conditions such as depopulation of the working age population, small businesses vulnerable to shocks, poor fiscal independence, which cause a vicious circle of reduced regional development and growth. Cooperative regions not only reduce the transaction costs by regional governments, such as building infrastructure for transport and communication, but also promote cooperative production for achieving economies of scale and scope to reduce production cost. This makes local enterprises supply a wide range of goods and services, increasing the utility of residents according to the 'love of variety' principle, which can form a virtuous cycle by increasing local consumption. This study provides a strategy for sustainable internal growth in rural areas by enhancing regional resilience with smart planning, without massive fiscal investment.

Citations


Key Words: regional economic resilience, cooperative production region, regional inequality, revitalization

CHANGES OF MULTIPLE SEGMENTATION PATTERNS OF THE LABOR MARKET AND HETEROGENEITY OF GAP IN KOREA: A IN-WORK POVERTY AND SLOW-ONSET DISASTER
Abstract ID: 736
Individual Paper

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Several global economic crises have caused the expansion and acceleration of the working poor. One of the structural factors for this is the segmentation of the labor market, which is reported to cause inequality in the employment structure. The purpose of this study is to identify the labor market structure of each region in Korea (especially in contrast to the capital metropolitan area) and to empirically identify the existence of hierarchy and mobility constraints. Based on data from the 21st to 23rd years(2018-2020) of the Korea Labor and Income Panel Study(KLIPS), the structure of the labor market by region was identified through Latent Class Analysis (LCA), and as a result, the multi-segmentation (4 floors) of the labor market is observed by region. The occupancy ratio shows similar results from region to region, and consists of approximately 30% for upper, 55% for middle (12% for lower-middle and 43% for upper-middle), and 15% for lower. Variables such as age, gender, educational background, and industry were input as covariates to determine outsiders. It was confirmed that the proportion of outsiders (women, young or old, low education level, etc.) traditionally reported in the labor market in the lowermost labor market is gradually increasing. Moreover, what is noteworthy is the division pattern of the middle layer. The possibility of division from the middle class (the upper-middle and lower-middle) could be indirectly identified through group average income and average latent class posterior probability. The analysis of inter-class transition possibilities through Latent Transition Analysis (LTA) allowed us to focus more on this differentiation. As a result of the analysis, there are clear restrictions on movement between classes. Moreover, through the transition probability, it was confirmed that exchanges between the lowest and lower-middle layers or between the top and upper-middle were more active than exchanges between the upper-middle and the lower-middle. It is encouraging that the movement between the lower-middle and bottom layers can be flexible. However, it is considered that the economic status of the lower-middle class workers has shifted downward rather than upward due to the rise in the economic status of the lowest-tier labor market workers. In addition, differences in the labor market by region could be confirmed through the transfer probability. In the case of provinces except the capital metropolitan area, the exclusive status of the top internal labor market class seems to be more solid. In a segmented structure of labor market, having a heterogeneous gap, with increasingly widening and "coagulating" gap between the middle classes and increasingly narrowing and "melting" barrier between the lower-middle and lowermost classes, it may suggest the possibility of gradually sticking to a dichotomized disconnection structure. The structural problem of the labor market, where movement between classes is limited, is that outsiders are falling into the "mire" of in-work poverty. In-work poverty is one of a slow-onset disaster, because the outsiders can be consumed as a buffer in the event of a future economic shock, it needs to be strictly managed in terms of urban resilience inventory.

Citations

- Filandri, M., Struffolino, E. (2019) Individual and household in-work poverty in Europe: understanding the role of labor market characteristics, European Societies, 21(1), pp. 130-157

Key Words: Segmentation of Labor Market, In-work Poverty, Working Poor, Urban resilience, Mixture Model

DIVERSITY, EQUITY, AND INCLUSION PRACTICES IN U.S. ARTS AND CULTURAL DISTRICTS
Abstract ID: 771
Individual Paper

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Arts and cultural districts first emerged as an economic development strategy in the 1990s and proliferated in the 2000s, often in reaction to state, regional, and local programs and incentives. Arts and cultural districts are geographically demarcated areas that concentrate arts and cultural production and consumption. They may emphasize a particular art form, ethnic or cultural background, food, or period in history, or encompass clusters of more than one of these elements. Planners, arts advocates, and boosters of such districts argued that arts and culture could become a basic industry, attracting tourists and their dollars to economically precarious downtowns. Many city leaders looked to replace industrial sector employment and tax base with a creative economy approach, which included leveraging artists and their presence as an amenity to draw highly educated workers and/or using art and creativity as a source of product innovation and small business entrepreneurship.

However, the increased economic development emphasis on creative economy and placemaking, including within arts and cultural districts, has sharpened critiques from scholars and activists that place-based arts and cultural economic development or creative placemaking may emphasize aesthetics and promote gentrification rather than focusing on belonging and ensuring inclusiveness. Arts and cultural districts often reflect and center certain narratives about place, while leaving others out, creating feelings of “dis-belonging” for those who don’t fit the dominant narrative. As the number of arts and cultural districts grew from a handful to over 500, Americans for the Arts developed a technical assistance program that covered a variety of arts and cultural district topics on capacity, leadership, structure, and funding, but did not particularly focus on diversity, equity, and inclusion (DEI).

Some arts policymakers and advocates are increasingly focusing on how to support DEI from a variety of different angles, such as mandating DEI statements from arts and cultural granting recipients; requiring a diverse makeup on arts and cultural boards as well as including DEI training; promoting cultural asset mapping with a DEI focus; using arts and cultural investment for community development, not just economic development. Given that arts and cultural districts are so widespread, it is important to understand barriers to and best practices for making those districts inclusive, equitable drivers of economic and social innovation. To start, it is important to understand arts and cultural districts’ current practices.

Through a survey of over 600 arts and cultural district leaders, we investigate if, why, and how arts and cultural districts support diversity, equity, and inclusion. In this paper, we discuss the results of the survey, explain the range of practices reported by arts and cultural districts leaders around diversity, equity, and inclusion, and examine the challenges they face. Finally, based on the survey data, we recommend good practices around DEI for different types of arts and cultural districts.

Citations

Key Words: arts and culture, cultural districts, diversity, equity, inclusion

CRISIS AS OPPORTUNITY: HOW LOCAL ECONOMIC DEVELOPMENT OFFICIALS CONCEIVE OF INCLUSIVE RECOVERY STRATEGIES IN THE AFTERMATH OF COVID-19
Abstract ID: 821
Individual Paper

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As leaders in communities across the world grapple with how to ensure an equitable and inclusive recovery from COVID-19, many have had to confront a series of significant challenges, most notably the discovery that there is no policy playbook to draw from nor any definitive best practices (Cowell, et al, 2023; Dzigbede et al., 2020). To improve our understanding of how communities respond to crises and how inclusive recovery concerns are (or are not) embedded in economic development responses to said crises, we draw from survey and interview data to explore the responses of local economic development officials across Virginia in the aftermath of the COVID-19 pandemic. Our research seeks to answer two main questions: 1) How are concerns for inclusive economic recovery exhibited in local and regional recovery planning processes and in the strategies and plans that result? 2) What are the main challenges and opportunities facing local economic development officials as they work to ensure an equitable and inclusive recovery from COVID-19?

Scholars at Urban Institute defined an inclusive recovery as “... when a place overcomes economic distress in a way that provides the opportunity for all residents—especially historically excluded populations—to benefit from and contribute to economic prosperity” (Poethig et al., 2018, p. 2). Similarly, a Brookings essay from 2020 offered a framework focused on actions that can be carried out by local leaders in partnership with public, private, and philanthropic investors to improve local economies and strengthen racial inclusion (Liu et al. 2020). While these and other scholars have shone a light on the concept of inclusive recoveries, a recent review of the literature suggests that there is not yet much scholarship focused on local economic development efforts to plan for and cultivate inclusivity, particularly in times of duress.

Our research seeks to fill this gap by incorporating preliminary findings from a panel survey and in-depth interviews with economic developers working in Virginia municipalities. Survey data reveal widespread differences in both the extent to which inclusivity is prioritized as well as the ways in which it is conceived of in recovery plans across Virginia. Data from the practitioner interviews offer insights into some of the challenges facing these jurisdictions, including: capacity limitations; agreeing upon a definition of inclusivity; broadening the decision-making table to be more inclusive and representative; and limited training and/or knowledge about inclusivity amongst practitioners. We conclude with a discussion of how local officials might capitalize on the approximately 60% of survey respondents who said that their jurisdictions are likely to prioritize inclusion in their future economic development plans.

Our findings should prove useful to scholars and practitioners interested in learning how their peers are framing inclusive opportunities in their recovery strategies and plans, how they have spent funds, and how they plan to spend forthcoming funds. The findings will help current and future state and local leaders as they integrate inclusive recovery priorities into their own plans in the short and longer term.

Citations


Key Words: inclusive recovery, local economic development, COVID-19, equity

ASSEMBLING DEALS IN DETROIT: INSTITUTIONAL REFORM AND THE RETENTION AUTO MANUFACTURING
Abstract ID: 885
Individual Paper

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What possibilities are available for practitioners to reform or renew entrenched economic development institutions towards normative principles of social equity? From the 1950s through the 1990s, the City of Detroit pursued an economic development strategy of “industrial urban renewal” to retain and upgrade its manufacturing base through a combination of land assembly and incentive policies. Against an expensive and decades-long record of failure to mitigate job loss and disinvestment, the sustained application of this approach led to arguments that economic development efforts had succumbed to path dependency and “policy lock-in” (Thomas 1990, Jones and Bachelor 1993), more and more resembling the megaprojects and public-private partnerships that have long characterized the city’s downtown revitalization efforts. While apologists point to the city’s weak market context and desperation for jobs, critics contend that this process has deepened racial and spatial inequalities, as it has generated more employment for suburbanites than Detroiters and failed to direct significant income or investments to Detroit neighborhoods outside the downtown core (Reese et al 2017). Since 2018, however, state and local agencies have touted a new round of large and medium-sized industrial projects in the city, justifying new extensions of public support on claims that they will bring growth with equity. In what ways do contemporary economic development deals replicate or deviate from earlier ones? What roles do public agencies and private groups play in networks of monitoring and implementation, and to what extent have these networks shifted?

This paper addresses these questions through an extended, comparative case study of economic development projects targeting the automotive industry in the City of Detroit at two periods of time, the 1980s-90s and the present day. The case narrative emphasizes initiatives organized around two assembly complexes in Detroit, owned by GM and Chrysler (now part of the Stellantis joint venture), with references to other recent auto-related projects. During the 1980s and 1990s, GM and Chrysler constructed facilities on or near the sites of obsolescent plants – retention projects which were heavily subsidized by fiscal incentives and aggressive land assembly actions. Again, in 2019, both firms received state and local support in exchange for new investments at the same locations. Drawing on archival documents, secondary literature, news articles and interviews, I examine three aspects of the retention deals during both periods: the public policies applied, incentive negotiations among public agencies and the auto-makers, and the public and private actions that implement the deals.

I show that variations across the projects and over time indicate a meaningful break with late-20th Century practice. Fiscal incentives and, in the FCA case, land assembly remain the controversial fulcrums of public-private negotiations. Yet the recent deals are orchestrated around stronger performance requirements and different relationships between state and local government and industry. Policy insiders have leveraged new tools, such as the City’s Community Benefits Ordinance, to develop local hiring pathways for thousands of Detroiters and mechanisms intended to mitigate negative externalities in surrounding neighborhoods, building linkages across
unconnected policy realms to resolve practical tensions (Lowe and Feldman 2018). In doing so, they draw in public and private labor market intermediaries and community development organizations as collaborators in the implementation processes.

Citations


Key Words: Economic development, Industrial retention, Auto industry, Detroit, Workforce development

TRUCK DRIVER TRAINING: CONSIDERATIONS FOR WORKFORCE DEVELOPMENT

Abstract ID: 922
Individual Paper

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Introduction: The truck driving industry is facing several challenges in training workers. These issues range from insufficient training to graduate drivers more quickly in a time of truck driver shortages (Semuels, 2022) to potential workforce disruptions related to autonomous vehicles (Czaja et al., 2020; Frey & Osborne, 2017). The driver shortage has been a long-term problem in the trucking industry for decades and was exacerbated during the recent COVID-19 pandemic when supply chain issues highlighted the need for workers in this occupation. The deficit of truck drivers in the United States hit a historic high of more than 80,000 drivers in 2021 (American Trucking Associations, 2021). Truck driving jobs are also anticipated to be impacted by autonomous systems adoption because trucking companies can realize cost savings from reduced payrolls and higher fuel efficiency. The impacts of this adoption mean that drivers may need to adapt to working with autonomous systems.

Given the increasing demand and changing requirements for truck drivers, a series of regulations have been enacted to ensure entry-level learners receive standard and quality training. Right now, aspiring truck drivers can obtain a certified commercial driver's license training from either a truck driving school or a community college. The evidence indicates that the number of accredited driver training providers has increased significantly in the recent decade, reshaping the workforce of the trucking industry.

Despite the importance of this occupation to the global economy, we have little information about the entities involved in providing truck driver training. To address this knowledge gap, we analyze the institutions providing truck driver training and the variations in the educational programs of these entities. The paper will also assess mechanisms for funding driver training and how regulations are shaping how training is conducted. The findings of this study may concern planners and policymakers who aim to resolve the issues of supply chain disruption, sustainability and safety of transportation systems, and workforce development in the logistics sector.
Methods: To address the gap, we first analyze statistics for the recent 20 years from various secondary data sources that picture the trend and status quo of the trucking workforce and driver training. Maps, diagrams, and tables are created to illustrate the changes in truck drivers' employment and wages by year and by state, the sociodemographic characteristics of students in driver training programs, the locations of those programs, and students' funding sources.

Furthermore, we conduct and profile five case studies on a selected sample of truck driver training providers. The sample comprises four community colleges and a private truck-driving school, representing varied approaches to driver training. By interviewing the administrative staff from these entities, we delve into the questions about program and curriculum development, placement and licensing, partnership, tuition and financial aid, and the impact of autonomous vehicles.

Finally, we conduct a documentary analysis to investigate the evolution of federal regulations for truck driver qualification and training.

Results and Policy Implications: Our results showcase an increase in the employment of truck drivers and a decline in drivers' wages over the last 20 years. The number of training providers has increased significantly, and students have become more diverse regarding race and ethnicity. Training providers adopt distinct approaches to training based on their motivation, institutional structure, infrastructure, and priority. The results also reveal that federal regulations significantly impact the number of entities engaged in driver training.

The findings shed light on workforce development in the logistics industry. Proactive planning and policies will be needed to facilitate the innovations in truck driver training that tackle supply chain disruption and driver shortage and mitigate the negative workforce impact of automation systems.

Citations


Key Words: Truck driver training, Workforce development, Supply chain, Commercial driver's license, Community college

HOUSING VALUE VARIATION ACROSS HIGH-TECH FIRM CLUSTERS IN THE UNITED STATES
Abstract ID: 946
Individual Paper

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High-tech industries, with the growing share from national employment, Gross Domestic Product (GDP) and innovation productivity, play a bold role in the current economic development planning and policy efforts (Aghion et al., 2015; Drucker & Kass, 2015; Katz & Krueger, 2016). As the result, planners and policymakers increasingly search for the quick tools and strategies to transition post-industrial economies into tech-based economies. Consequently, urban policies integrating the development of tech-based knowledge clusters using amenity richness placemaking practices (e.g., innovation districts, urban laboratories, and urban tech hubs) have been the center of attention in the recent years (Zandiatashbar, 2019; Katz & Krueger, 2016; Yigitcanlar et al., 2008).

These economic development models and strategies have also been the subject of debates that warn about their strong potentials for gentrification, displacement and housing unaffordability (Atkinson & Easthope, 2009; Voith & Wachter, 2009). According to the theoretical contexts, high-tech based urban development most often focuses on improving urban amenities in order to attract creative and knowledge-based workers, new construction and real estate investments (the forces that can grow real estate market) as well as higher wages of the high-tech sector (demand for a growing real estate market) which together could be strong dynamics for the housing unaffordability (Shearmur, 2012a; Voith & Wachter, 2009). In addition to housing unaffordability; literature also points to other costs of high-tech urban clusters such as health risks and impacts on environment, landfills, waste sites or hazardous manufacturing facilities that depend on the activities and sectoral needs of a high-tech industry (Chiu, 2011; Heppler, 2017; Yoshida, 1994). These costs, on the other hand, could have negative impact on the real estate market. However, these costs vary based on the tech clusters' attributes such as sectoral type, size, and location.

Yet; despite few case studies that have focused on one or few districts and cities, there is little empirical evidence on the costs and benefits of high-tech clusters largely because there is no information on the geographic boundary, location and sectoral type of (Alecke et al., 2006; E. Feser, 2004; Maggioni, 2002; Zandiatashbar, Hamidi, & Foster, 2019a). Consequently, there is little existing research on the relationship between high-tech clusters and property values, controlling for sectorial classifications and the socio-economic and built environmental confounding factors. This talk addresses this gap in planning research and practice by using the micro-geography and sectoral typology of high-tech zones to statistically test the impact of high-tech clusters’ sectoral types on their nearby housing values in the 52 largest metropolitan areas in the U.S.

By utilizing the Propensity Score Matching methodology, this study shows that housing unaffordability risk strongly varies across different sectoral types of high-tech clusters. For instance, the tech clusters specialized in professional services and diverse specializations have significantly higher housing values; while, tech clusters specialized in IT manufacturing, semiconductor, and telecommunication manufacturing firms are associated with the lower housing value. Ultimately, this talk concludes that the mitigating policy actions for the rising housing unaffordability in the era of high tech economy requires the knowledge about the location and sectoral type of high-tech clusters.

Citations


Key Words: High-tech cluster, Housing, Economic Development

HOW MUCH ARE MINORITY NEIGHBORHOODS AFFECTED DURING COVID-19 IN THE U.S. IN THE ASPECT OF BUSINESS CLOSURE RATES? EVIDENCE FROM COLUMBUS, OH AND THREE OTHER METROPOLITAN AREAS
Abstract ID: 960
Individual Paper

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This study examines the impact of business closures on minority neighborhoods in the U.S. during the COVID-19 pandemic, analyzing both the disruption period and recovery period over time, and compares their spatial impact to white neighborhoods at the neighborhood level, exploring similarities and differences across four metropolitan areas. The analysis over time provides insights into the dynamic nature of the impact of business closures on minority neighborhoods, which has been lacking in previous studies. This study employs Geographical and Temporal Weighted Regression (GTWR) and compares it to traditional Ordinary Least Squares (OLS) to analyze the business closure rates in different ethnic communities. The closure rate is considered as the dependent variable, while the explanatory variables include human movement, demographic factors, and access to healthcare. The results from Columbus, OH show no statistically significant correlation between closure rates and racial distribution after controlling for business size, type, and experience. However, we plan to compare these results with three other metropolitan areas to provide a more comprehensive evaluation of the impact of business closures on minority communities. This study contributes to ongoing discussions on social equity and pandemic response by providing important insights into the impact of COVID-19 on minority neighborhoods in the U.S.

Citations


Key Words: business closure, minority neighborhoods, covid-19, spatial analysis

MAKING SPACE FOR MAKING: EVIDENCE FROM CANADIAN MUNICIPALITIES
Abstract ID: 1053
Individual Paper
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Since the early 2010s, the maker movement has gained popularity amongst policymakers as a means for reinvigorating local economic development by merging new manufacturing technologies with the creative energies of a young and digitally connected workforce. As manifest in the construct of makerspaces, the maker movement has become a common presence in public institutions like libraries and schools, but has also taken hold in start-up accelerators and corporate offices. The ethos of the maker movement also intersects and aligns with a breadth of discourses on city building (e.g. urban and economic development, innovation, manufacturing, cultural development and creative cities), leading its most enthusiastic supporters to champion the movement as a panacea for community and economic development (Anderson, 2012). More tempered supporters still frame the maker movement as an important policy tool for reinvigorating local manufacturing and contributing to community education and skill development (National League of Cities. 2016). If fully realized, the promise of policymaking efforts that effectively incorporate making into economic and community development is the potential to create high-tech, high value forms of local production, as well as high quality jobs.

However, the popular and policy interest in the maker movement has also generated scholarship that is critical of the movement’s potential for community growth and economic development. For example, Wolf Powers et al (2017) question the ability of community makerspaces to generate meaningful local economic growth, largely due to the inherent limitations of scaling up new local ventures and the accompanying job creation. Vinodrai et al (2021) find that makerspaces themselves do not necessarily provide the perceived opportunities for individual growth and entrepreneurship, and that substantial economic barriers ultimately limit the contributions of makerspaces to more inclusive forms of urban economic development. Although recent scholarship casts doubt on the economic potential of makerspaces, and therefore raises questions about their role in local economic development and innovation strategies (Grodach et al., 2017), it has left largely unexplored the question of how urban governments position makerspaces and making within their local policies, programs and strategies. Moreover, there is limited empirical evidence on makerspaces beyond Europe and the United States. This paper begins to redress this gap through a comprehensive examination of makerspaces and makerspace policy across Canada by asking: 1) How do politicians and policymakers in Canada’s largest cities publicly position the maker movement and makerspaces within municipal economic development and city building strategies; and, 2) How do makerspaces publicly position their contributions to the local economy?

To answer these questions this paper offers a detailed examination of municipal public communications and policy documents from the seventy-nine largest municipalities in Canada. Additionally, and as a point of comparison, this paper also identifies makerspaces within these municipalities and examines how these organizations present their mission and values to the public. Our analysis reveals diverse and highly aspirational visions for community makerspaces, with divergence between policy and practice. First, makerspaces—as both physical spaces and policy tools—have spread to nearly all of Canada’s largest municipalities, suggesting that making has become omnipresent in the toolboxes of local policymakers. Second, municipalities generally frame makerspaces within initiatives directed at economic development, education and skill development, suggesting a belief in the entrepreneurial potential of the maker movement. And, third, that makerspaces themselves tend to view their contributions and mission as more aligned with individual and community development rather than economic development. This paper ultimately concludes that despite the widespread aspiration to embrace the maker movement as a tool for local community and economic development, its integration into local policymaking remains diffuse and often at odds with the aspirations and intentions of makerspaces themselves.

Citations

DOWNTOWN RECOVERY IN NORTH AMERICAN CITIES POST-COVID-19: EXPLORING EXPLANATORY FACTORS USING LOCATION-BASED SERVICES DATA

Abstract ID: 1102
Individual Paper

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Downtown areas play a vital role in the economic, social, and cultural well-being of cities. However, the COVID-19 pandemic has had a significant impact on downtowns, presenting unprecedented challenges to their recovery. Understanding the factors contributing to different recovery rates across North American cities is essential for designing effective policies and strategies for promoting a more equitable and resilient recovery. Thus, this study aims to determine the factors that contributed to different recovery rates among the 62 largest cities in the United States and Canada during the COVID-19 pandemic. We first estimate recovery rates using Location-Based Services (LBS) data from mobile phones, counting visits between 2020 and 2022 and comparing them to 2019 levels. We then use Linear Regression and Random Forest Regression to understand how disparities in downtown recovery rates in different cities are correlated to various explanatory variables from four categories: employment by industry, socioeconomic factors, environment and urban form, and COVID-19 policies. Our results show that downtowns throughout North America are recovering more slowly than the suburbs, and that a distinct set of downtowns continue to struggle to return to pre-pandemic levels. These downtowns are typically older, denser, reliant on professional or tech workers, and more likely to be located within large metros. In contrast, downtowns with high concentrations of non-traditional industries like healthcare, education, arts and entertainment, and public administration recovered well, and in some cases exceeded their pre-pandemic visitation performance. The findings of this study can inform city governments, downtown business associations, real estate developers, and communities on how to reinvent the North American downtowns in order to succeed in the “new normal”.

Citations


Key Words: Downtown, Pandemic Recovery, Location-Based Services Data, COVID-19, North American Cities
WHAT ROLES DO HIGH-GROWTH SMALL- AND MEDIUM-SIZED ENTERPRISES PLAY IN A SLOW-GROWING REGION? THE DIVERSE JOB CREATION AND INCLUSIVE GROWTH IN THE CASE OF INCHEON, SOUTH KOREA

Abstract ID: 1154

Individual Paper

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Contrary to the keen policy interest in fast growing firms, only a small percentage of firms expand at an incredibly fast rate. Approximately 2~4% of all firms achieve high-growth but they spawn an outsized impact on the economy since they generate around 60~70% of all new jobs. As such, high-growth firms (henceforth HGFs) have a significant economic impact, but little is known about what kind of jobs they generate. Do they follow the footsteps of innovative firms that selectively hire a small group of high performers (with high educational attainment) and reward them with relatively safe jobs and high salaries? Or do they create decent jobs for production workers or employ people marginalized in the labor market, such as less-educated workers, female workers, or individuals who are currently unemployed? What impact do the labor market outcomes of HGFs’ jobs have on the local economy during economic downturns? If academics and policy makers are paying close attention to HGFs’ because of their disproportionately large job creation effects, we should at least know if the jobs they produce exacerbate the current labor market problems.

A small number of studies have addressed these imperative questions (Coad et al., 2014; Daunfeldt and Westerberg, 2017), but they did not discuss the qualitative aspects of HGFs’ jobs. This study, therefore, aims to broaden the scope of the investigation to what types of jobs HGFs create during their high-growth period and for whom. This study uses the term “employment practice” to indicate the combination of a firm’s hiring decisions (as to whom to hire) and the workplace conditions manifested in the types of jobs and/or quality of jobs. The investigation is carried out on SMEs in the manufacturing sector in the City of Incheon, South Korea, for the period of 2013–2016. SMEs indicate firms with fewer than 300 employees in this study. Incheon is a slow-growing region with unstable labor markets, which makes it an intriguing case to examine how HGFs’ employment practices affect the local labor market. More crucially, as this study concentrates on the period of economic depression in Incheon, the findings will reveal whether HGFs support the local economy by adding jobs when other businesses cut employees.

This study found that a small number of high-growth firms (HGFs) created the most of new jobs, while other firms cut their employees in response to the economic challenges. While overall SME HGFs tend to hire people with high human capital, a group of HGFs tend to hire people who are marginalized in the labor market: micro-firms that show one-time sharp growth are more likely to hire unemployed middle-aged women and assign them to secure and better-paying positions. Thus, the incumbent micro-HGFs can be a significant source of new job creation and inclusive growth. Small and incumbent firms should receive more attention from public policy circles because, although appearing to remain dormant for longer than 10 years, they can surprisingly organize high growth when the chance arises. Depending on the local circumstances, policy packages to promote the incumbent firms can vary, but one thing is certain: supporting older and smaller businesses can be accomplished using a portion of the funding set out for larger firms.

Citations


Key Words: small- and medium-sized enterprises, high-growth firms, incumbent small and medium-sized enterprises, inclusive growth, slow-growing regions

RURAL CREATIVE ECOLOGIES AND SUSTAINABLE ECONOMIC DEVELOPMENT

Abstract ID: 1156
Individual Paper

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Many rural communities continue to grapple with the effects of de-industrialization including a shrinking and aging population, obsolete infrastructure, declining tax base and loss of essential goods and services. Similar to struggling postindustrial urban places, rural places have sought to revitalize local communities through arts and culture in order to attract young people, creative producers and entrepreneurs in addition to supporting tourist-based economies (Duxbury 2021). Specific arts-based rural development strategies have tended to focus on placemaking initiatives, which builds on creative city and creative cluster-based logic. Sparked by Florida’s creative class theories, such initiatives assume that the dense co-location of creative practitioners and firms supports entrepreneurship, innovation and regional growth. Further, such ‘creative clusters’ are theorized to regenerate local places by adding value to other industries and enhancing quality of life (Stern and Seifert 2010).

Creative cluster-led policies, however, may be inappropriate for sustainable economic development, especially in rural areas. First, strong creative clusters are often accompanied by uneven regional development, gentrification, labor precarity and sector exclusion, which undermine sustainable development outcomes (Fleming 2009). Second, clusters metrics do not effectively capture the wide range of participants, values or social impacts related to creative activity (Borrup 2017). Finally, there is a strong urban bias related to creative cluster research and policymaking (Verdini 2021). Clusters are inextricably linked to urban agglomeration dynamics. Further, creative cluster definitions tend to include specific industries such as advertising, architecture, design, fashion, television and film production in addition to visual and performing arts which are more prevalent in urban contexts. Rural creative communities are more likely to feature craft, heritage, food and outdoor recreation activities, which fall outside conventional creative cluster metrics.

Reimagining rural creative economies through an ecological framework, however, highlights diverse, creative networks which could play a more powerful role in sustainable economic development (de Bernard, Comunian, and Gross 2021). To explore this potential, this research introduces a framework conceptualising key distinctions between creative clusters and creative ecologies including measures, spatial distribution, values and impacts. The conceptual framework is then applied to the Chequamegon Bay region in Northern Wisconsin. Using network mapping and interview data, the research highlights the spatiality and diversity of rural creative economy participants, their roles and relationships within the regional creative ecosystem, motivations, values, perceived development impacts and challenges. In so doing, the paper highlights the limitations of creative cluster-based development strategies for rural communities and proposes alternative policies to support more resilient, equitable and inclusive creative economy ecosystems.

Citations

THE DIVISION OF FOREST LABOR: INEQUITIES IN THE FORESTRY SERVICES WORKFORCE IN THE PACIFIC NORTHWEST
Abstract ID: 1180
Individual Paper

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This paper aims to identify how structural factors impact the lived experiences of workers and contractors in the forestry services industry in the Pacific Northwest and the ramifications they have for equitable income, contracting opportunities, and the ability to advance in one's career across white and Latino ethnicities. By "structural factors," we mean things like agency policies, procedures, and practices, the social status accorded different types of work, biases built into the contracting system (for example, valuing "skilled" work more highly), and status obligations within kinship and professional networks.

We conducted semi-structured qualitative interviews with forestry services contractors in southern Oregon and forestry services contractors in northern California. We elicited narratives from business owners and forest workers about the challenges and opportunities they face, how they use their networks, working conditions, prospects for improving their conditions or owning their businesses, and the path to business ownership for established owners. We gained detailed descriptions of employer and workers' experiences within the socio-political context in which they act and how that context bears on their aspirations, motivations, opportunities, and disappointments. Interviews also captured demographic and social data.

Previous studies have found a segmented labor market in which Latino workers and contractors do labor-intensive work, which pays less and bears a lower social status. White workers and contractors do more technical forestry work that pays better and enjoys higher social status (Moseley 2006, Sarathy 2012). Research in this sector has also found that Latino forest workers face wage theft, high job-related injury, illness, fatality rates, Worker's Compensation Fraud, abusive supervision, and retaliation (Moseley 2014, Wilmsen et al. 2019, Sarathy 2012, Casanova and McDaniel 2005).

Our results support previous research that found a segmented labor market: Latino contractors doing labor-intensive work, white contractors doing technical forestry, and/or have found niches in firefighting work. A regional difference is which Latino contractors in southern Oregon have dramatically increased their hiring of temporary foreign labor (H-2B workers) while California contractors have not. White California contracts postulate that they are not hiring H-2B workers because they need highly skilled workers.
Our findings also indicate a drastic difference between labor and kinship networks between Latino and White contractors. White California contractors are tapping into different labor markets than Latino contractors: UC Davis grads, former felons with fire fighting experience released under Governor Newsom’s effort to reduce prison populations, lead sawyers from fire fighting crews. These White California contractors also appear to have more robust social networks in federal and state agencies. In contrast, Latino contractors tend to have strong social and kinship networks among themselves, and they identify this as key to starting their businesses and their success.

Citations

• Emily Jane Davis, Reem Hajjar, Susan Charnley, Cassandra Moseley, Kendra Wendel, Meredith Jacobson, Community-based forestry on federal lands in the western United States: A synthesis and call for renewed research, "Forest Policy and Economics", Volume 111, February 2020,

Key Words: forest work, sustainability, disaster mitigation, guest workers, racial equity

ROLE OF BUILT ENVIRONMENT ON KNOWLEDGE CREATION: A INVESTIGATION BASED ON THE INFLUENTIAL PATH THROUGH THE WORK INTENSITY AND SOCIAL CAPITAL

Abstract ID: 1299
Individual Paper

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The relationship between urban space and knowledge creation in the context of a knowledge-oriented economic development has attracted considerable attention. Two main sources of innovation have been identified based on endogenous growth theory and Schumpeterian economic theory. The first focuses on the role of human capital, while the second emphasized the effect of knowledge spillovers and external economies of scale. These two aspects can be linked to the built environment through two paths at both the worker level. The urban public service such as education, public health, and transportation can enhance human capital, reduce commuting time, and provide living support, which can improve the work productivity of workers. The urban amenities such as coffee shops, restaurants, and other entertainment facilities can provide a place for social interaction between workers, enabling knowledge exchange. In the long term, both can attract more knowledgeable and skilled workers to urban areas with convenient urban services. Understanding the mechanism of knowledge creation on the worker level can provide insights for urban planners and policymakers to improve urban innovation.

However, relevant studies have difficulty in systematically considering the built environment effects due to various confounding factors, which can lead to endogeneity between built environment factors and knowledge production. On the aggregated level, ample evidence has shown the relationship between built environment features such as urban compactness, connectivity, and proximity to the third place with the location-based knowledge production. While the neglect of the causal mechanisms of knowledge creation through human and social capital makes it difficult to provide practical guidance for policymakers.
To address these challenges, this study will investigate both the indirect effect of urban form and urban amenities' accessibility on knowledge creation using two-stage regression (2SLS) with the spatial units of 250m grid, through the role of work and social activity intensity. Specifically, work, and social activity intensity can be considered as key indicators of human and social capital that have a direct effect on knowledge creation. Work intensity can be measured by the average work time per day and employment density, while social activity can be measured by the frequency, duration, and area of daily social activities around the workplace. Both can be measured through location-based service data that records the individuals' work and residence location and daily travel trajectory in a month. Moreover, the knowledge production can be measured by the growth of patents in a certain period using the panel data on patent registrations by year. This study will also control the confounders at the worker and firm levels, such as the socio-economic attributes of workers and the composition of industrial sectors.

The findings suggest that the intensity of both work and social activities of workers has a significant impact on knowledge creation. Based on these findings, this study will further estimate the indirect effect of built environment features on knowledge production. The evidence-based results will provide insights for policymakers and urban planners to adopt more efficient policies related to different urban services to promote urban innovation and knowledge economy development.

Citations


Key Words: Knowledge Creation, Built Environment, Human and Social capital, Two-stage Regression (2SLS)

INTEGRATION OR PRECARIZATION? REFUGEE LABOR IN A SEGMENTED LABOR MARKET IN GERMANY

Abstract ID: 1307
Individual Paper

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A big challenge for the European countries receiving a large number of asylum seekers in 2015 and 2016 has been the inclusion of newcomers in the labor market. Germany, which received around half of the 3.1 million asylum applications submitted between 2015 and 2017 in the European Union (Brücker et al., 2019), has been challenged to integrate the newly arrived asylum seekers and refugees into work. Governments at federal, state, and municipal levels as well as a variety of for-profit and nonprofit organizations have had to invest significant resources to introduce a wide range of integration courses, language courses, vocational training, and qualification and skill assessment programs targeted at facilitating refugees' language acquisition, training, and their entry into the labor market (OECD, 2017; Brücker et al., 2019).

The National Integration Act that was introduced in 2016 defined how this inclusion would take place and guided the inclusion efforts taken at the federal and state levels in Germany. Following this Act, the federal government has adopted a strategy of active and early labor market integration for refugees (OECD, 2017; Schwenken, 2021). However, the law requires refugees to actively look for a job, participate in the state-sponsored integration programs (if their status allows) and become independent of social benefits as quickly as possible. It also mandates that if refugees refuse to accept the jobs offered by government agencies, their social benefits may be cut (Maaroufi, 2017, Brücker et al., 2019; Hinger, 2020).
This paper investigates the role of the national integration policy and local factors (local economic conditions and employer practices) in determining refugees’ employment prospects and affecting their labor market outcomes in places of destination. To date, studies of immigrant inclusion in Europe have focused largely on the role of individual characteristics of refugees and their educational endowment (at the time of arrival in places of destination) in affecting their employment prospects. The role of institutions, national policies and local factors in affecting refugees’ employment prospects and experiences has been overlooked in research on immigrant integration in Europe. This study plugs this hole by using 70 in-depth interviews conducted between September 2020 and December 2021 with representatives from civil society organizations, state and local government agencies (including city municipalities, Job centers and employment agencies), professional associations, vocational schools, as well as refugees in three German cities, Berlin, Hamburg, and Munich. The interview data is supported by document analysis to seek answers to these following questions:

How do host country national legislative framework and integration policy affect refugees’ employment prospects?

How do local economic conditions and employer practices shape refugees’ employment experiences?

The findings show that since 2016, the national level approach to refugees’ labor market integration in Germany has pressured refugees to take up any kind of jobs and expose them to low wage work and poor working conditions, in sectors where their labor is exploited by unfair employer practices. These unfavorable working conditions together with other employment-related problems are most experienced by the less skilled refugees or the ones who have insecure legal status and cannot find enough support to access the labor market and improve their skills. Rather than addressing these problems and assisting refugees who are still unemployed 5 years after their arrival, the government has put greater emphasis on the importance of attracting high skilled immigration to the country and providing assistance and incentives for employers who are interested in hiring highly skilled foreigners.

Citations


Key Words: labor markets, refugees, labor market segmentation, immigration, economic inclusion

A MODIFIED REDRL APPROACH FOR TARGETING INDUSTRIES FOR REGIONAL ECONOMIC DEVELOPMENT

Abstract ID: 1309
Individual Paper

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Targeting industry sectors for economic development is a widely used practice. There are various methods for identifying target industries. Some techniques derive easily from theory. However, because most economic development organizations do not publicize their targeting methodologies, knowledge of effective targeting practices that achieve operational imperatives is murky and divergent. The Clemson University Regional Economic Development Research Laboratory (REDRL) targeting method is a widely known transparent approach developed in the early 2000s before the advent of many economic development data platforms common today. This research
updates the REDRL approach using more recent data platforms, including Chmura JobsEQ and EMSI/Lightcast, and explains the new process’s steps. Debates in the business and economic development literature on the efficacy of target marketing frame the research. The conclusion is that targeting makes sense, but there exists a need for post facto scholarly research to show the approach is sound policy.

Citations


Key Words: Industry targeting, Economic development, Strategy, Methods

MEASURING TWO DECADES OF URBAN SPATIAL STRUCTURE: THE EVOLUTION OF AGGLOMERATION ECONOMIES IN AMERICAN METROS

Abstract ID: 1323
Individual Paper

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In this paper we examine the evolution of urban spatial structure in U.S. metropolitan areas over nearly two decades. Using annual block-level data from the Longitudinal Employment Household Dynamics database, we introduce a technique for identifying regional employment centers that both adheres to urban economic theory and pays homage to classic contributions in local spatial statistics. Centers are defined as local spatial statistical outliers on the network-based job accessibility surface. We proceed by identifying the location and employment makeup of centers for each metropolitan region in the USA from 2002 to 2019 and discuss emergent trends across time and space. Critically, we not only explore empirical patterns, but we discuss the relationship between polycentricity, the evolution of urbanization and localization economies, and regional specialization. We confirm again the pattern of polycentricity in U.S. metros and show that the structure of metropolitan employment is largely stable over time. We also document a continuing trend away from urbanization economies into more specialized subcenters.

Citations


Key Words: employment centers, polycentrism, agglomeration, spatial analysis

WHAT REGIONAL ADVANTAGES FOSTER ROBOT ADOPTION AMONG SMALL AND MEDIUM-SIZED MANUFACTURERS?

Abstract ID: 1354

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The Covid19 Pandemic revealed significant vulnerabilities in U.S. supply chains. In response, Executive Order 14017 was issued in 2021, directing a comprehensive government assessment of supply chain vulnerabilities along with development of strategies to increase resilience. A key focus of the White House response to the pandemic recovery has been on strengthening American manufacturing’s role in the nation’s critical supply chains, particularly the role of small and medium-sized firms (SMMs). Advanced manufacturing processes are particularly emphasized. Added to this is a focus on aligning “regional economic development strategies with the national supply chain strategy.”

This paper focuses on the advanced technology of robotics and its adoption by SMMs. While the development of robotic technology is rapidly progressing, its adoption has been uneven and relatively slow. Further, the disparities in robot adoption rates between large as well as small and medium-sized manufacturers are seen as a substantial issue in U.S. manufacturing competitiveness. To increase understanding of robot diffusion, this paper provides empirical evidence of factors that influence SMMs’ decisions on robot adoption.

We analyze multiple datasets, including microdata from the Annual Survey of Manufacturers (ASM) and Longitudinal Business Database (LBD), as well as Real-Time Labor Market Information (RTLMI), and build a comprehensive dataset for multi-level analysis. Using the integrated dataset, we 1) identify plant- and firm-level characteristics associated with robot adoption; 2) examine regional-level factors that influence robot adoption; and 3) investigate cross-interaction between firm sizes and regional characteristics. We expect to find regional advantages that play a critical role in facilitating robot adoption among SMMs. This is one of the first robot adoption studies conducted with a large-scale sample of U.S. manufacturers that can inform development of supportive industrial policy to strengthen competitiveness and regional economies.

Citations

MAPPING MEXICAN IMMIGRANTS’ RELATIONSHIP TO ECONOMIC DEVELOPMENT IN SOUTH PHILADELPHIA USING CONVENTIONAL RESEARCH METHODS AND INSTAGRAM

Abstract ID: 125
Research in Motion (RiM)

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The United States (U.S.) is experiencing explosive Latinx population growth, which has increased by 647 percent since 1970 and affects various facets of society (Funk and Lopez 2022). Currently, the Latinx population represents nineteen percent (62.1 million) of the U.S. population, and by 2050 is anticipated to rise to twenty-nine percent (128 million). In Philadelphia, Latinx and Asian populations have been the primary contributors to the city’s overall growth in the face of declining White and Black populations, with the Latinx population being fifteen percent (238,277) and the second fastest-growing population group after the Asians. Thus, this Research-in-Motion (RiM) will combine social media data (SMD) from Instagram with existing parcel data to better understand Latinx-operated businesses’ relationship to economic development and the South Philadelphia small business landscape. Identifying these data will be critical in modeling small business density in South Philadelphia and elsewhere.

This RiM utilizes mapping, spatial analysis methods, and SMD from Instagram to examine the differences and fill the gap in knowledge about the Latinx population as reported by the U.S. Census Bureau. There is prior evidence of Instagram use by Ilieva and McPhearson (2018), who argue that other disciplines, “such as digital humanities, urban ecology, epidemiology, tourism, disaster management and marketing,” utilize SMD from Twitter and Instagram; however, city and regional planning scholars have not widely adopted this practice (553). Moreover, Lazzarini and Baeza (2016) mention prior studies using Instagram images to “obtain the public image of the city.” Additionally, through the use of SMD and other data, this RiM seeks to discern to what extent Latinx immigrants contribute to Philadelphia’s vitality in the form of economic development in their neighborhoods in a step toward achieving integration. For purposes of this RiM, integration means “rapid economic advancement while still preserving immigrant values and solidarity” and the retention of “unique cultural customs and practices” (Lee 2009, 730-744). The RiM consists of a case study approach to identifying Mexican restaurants in South Philadelphia as the unit of analysis, given that Mexican immigrants are the largest immigrant group in the twenty-first century to inhabit Philadelphia. Statistical analyses include mapping Instagram geospatial data from images and posts with hashtags such as “#southphillymexicanrestaurant, #southphillymexicanjawn” to assess the presence of Mexican restaurants. Findings from the exploratory spatial analysis using Instagram geolocation data will be used with parcel data to complete small business density-based clustering in R to gain nuanced insights into the emerging ethnic enclave in South Philadelphia. Through mapping, spatial analysis, and the use of novel data sources, this RiM seeks to answer the following:

How might combining U.S. Census Bureau and Instagram geolocation data bolster knowledge about the small business landscape in South Philadelphia?
Additionally, how might this technique be useful for small business identification in other cities experiencing emerging ethnic enclaves?

Citations
BEARING THE BURDEN: THE DISTRIBUTIONAL EFFECTS OF RESIDENTIAL PROPERTY TAX EXEMPTIONS

Abstract ID: 145
Research in Motion (RiM)

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The property tax is the mainstay of local government finance in the United States. Compared to other taxes, it is highly visible and is normally administered at a local scale, characteristics that lead to much criticism and wrangling over both its details and essential features. Champions of the property tax (they exist!) endorse its reliability in funding local governments, its effectiveness at redistribution, and its capacity to balance the regressive and adverse aspects of other taxes (e.g., Youngman 2016). The property tax often is harnessed or manipulated to achieve aims beyond these, such as attracting or retaining businesses and supporting the redevelopment of distressed areas. We ask: how do the different pulls upon and maneuverings within the property tax system affect the consequences for local residents and businesses?

In this research, we explore the impacts of one common adjustment to property taxes—residential homestead exemptions. We evaluate the extent to which residential exemptions inject progressivity into the distribution of property taxes, providing a counter to typically regressive assessment practices (Ihlanfeldt and Rodgers 2022; Rakow 2022). We also gauge the influence of residential exemptions on the distribution of the tax by property type. How much do exemptions shift the incidence and burden of property taxes away from residential to commercial and industrial property owners?

We examine Cook County, Illinois, the second most populous county in the United States, which includes the City of Chicago along with a diverse assortment of more than 130 smaller municipalities with varied property tax and land use profiles. The Cook County Assessor’s Office has recently made available a powerful tool that facilitates the extraction and analysis of large quantities of detailed property tax information and the simulation of a wide range of policy modifications.

This research is an early part of a larger project to assess the system of property taxation in Cook County. Our work extends the literature in public administration and economic development investigating the strategic use and implications of property taxation, including recent studies of Cook County (Drucker et al. 2020; Funderburg et al. 2021). As the project progresses, we will add other aspects of the property tax system to our analysis, including abatements used as business incentives. A key purpose of the project is to illuminate how different interventions interact with each other and complicate the burdens and outcomes of the property tax system.

Citations


Key Words: economic development, immigrants, Latinx, social media, technology

Key Words: property tax, economic development, incentive, abatement, exemption

DO DECAYING INDUSTRIAL COMPLEXES AFFECT DECLINING CITIES AND REGIONS, AND VICE VERSA? A CASE STUDY OF SOUTH KOREA
Abstract ID: 466
Research in Motion (RiM)

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There were 456 old industrial complexes in South Korea, accounting for 36.8% of the total number of industrial complexes in 2020. Old industrial complexes that have been more than twenty years of construction have declined over time, mostly due to lack of infrastructure, aging industrial facilities, and lack of amenities. In addition, changes in the industrial structure can lead to employment instability, which affects a stagnation of the local economy and a continuous outflow of population, weakening the competitiveness of cities and regions and eventually leading to urban and regional decline. The Korean government has been implementing various regeneration projects for old industrial complexes and aging cities and neighborhoods. However, the policies and projects for revitalizing old industrial parks and regions have only been implemented in an individual manner without collaboration and integration. Therefore, it is necessary to examine whether decaying industrial parks affects declining cities and regions, and vice versa.

Numerous studies have argued that old industrial areas suffer from a lack of innovative capacity, resulting in decreasing production, rising unemployment, diminishing public and private investment, and declining living environment. This leads to a continuous outflow of people, which in turn results in a continuous decline in the population and employment of the regions. Therefore, innovative policies and programs for introducing regional innovation systems, innovation networks, and new industries are needed to revitalize declining industrial areas. However, the impact of industrial parks on the surrounding regions has not been fully considered in terms of urban regeneration.

This study aims to investigate how the decline of industrial parks interrelates with the decline of surrounding cities and regions, and to suggest implications for urban and regional regeneration in Korea. Specifically, attention has been paid to 319 general industrial and agricultural industrial complexes in South Korea between 2010 and 2020 that have been declined and more than twenty years of completion It examines the relationship between the decaying old industrial complexes and declining cities and regions.
A composite decay index is developed and used to measure the level of decay in old industrial parks and surrounding cities and regions. To take into account the characteristics of old industrial parks, we use variables such as total number of workers, the number of producers, total production value, year of construction, and the number of closed businesses. To consider the declining characteristics of cities and regions, various variables are employed in terms of population, industry and economy, and built environment. They consist of annual population growth rate, aging index, gross regional domestic product, total number of businesses, industrial diversity index, land price change rate, ratio of old housing and new housing to total housing stock, etc. Using a structural equation model, the causal relationships are examined between the characteristics of old industrial parks and the attributes of surrounding regions.

It is expected that decaying old industrial parks and declining regions feed off each other and increase negative impacts. As old industrial parks have been run-down, surrounding regions are depopulated, the working-age population decline, and the elderly continue to grow. Gross regional domestic product and industrial diversity are also expected to decrease, old houses are to increase, and the real estate market is going to stagnate. Conversely, due to the decline of the cities to decrease, and the proportion of closed business is to increase. As a result, it is essential to integrate and collaborate the policies and programs for revitalizing old industrial parks and declining regions.

Citations

- Yin, Y., Liu, Z. (2012). Creating new path for old industrial areas: a case study on Dalian City, China. Institute of Geographical Sciences and Natural Resources Research, 23(2), 127-136

Key Words: Old industrial complex, Urban and regional decline, Industrial complex regeneration, Composite decline index, Structural equation modeling

RECLAIMING THE MANUFACTURING NEIGHBORHOOD EXAMINING THE MANUFACTURING/LAND USE CONNECTION

Abstract ID: 919
Research in Motion (RiM)

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In the 1980s and 90s, shifts and changes in manufacturing practices, along with shifts and changes in the global economy led to wide scale economic decline in industrial cities across the world. In the US, vacant and abandoned properties were scattered across these so-called ‘rust-belt’ cities but most pronounced in their industrial neighborhoods. More recent urban economic development and land planning practices in core urban areas have been replacing lost industrial activity with service-based industries, threatening the integrity of legacy industrial corridors in crucial urban markets. Such development trends are evident in legacy urban neighborhoods where workers once lived within blocks of employment. These industrial neighborhoods are now home to new innovation districts, eclectic live work/spaces, shabby chic retail, and hipster coffee houses. Aging infrastructure becomes art...
as 'new and improved' development erases a once thriving industrial past. Yet urban manufacturing remains a core component of the US economy, providing diversification strength in local markets and overall fiscal health at a time when municipal budgets continue to strain as a fallout from the lingering effects of the Great Recession of 2008 and now the coronavirus pandemic. These post-industrial cities commonly welcome any and all redevelopment activity, while neglecting to establish updated industrial land use strategies that might help retain and support existing industry.

Previous industrial land studies have provided constructive insights into urban manufacturing neighborhoods and the factors that impact firm relocation. These analyses range from parcel inventories designed to assess patterns of land use change (Howland 2010, Leigh and Hoelzel 2012) and the impacts of urban revitalization and re-zoning decisions on firm location (Grodach 2022, Hatuka and Ben-Joseph 2022,) to detailed analysis of the relationship between industrial land conversion and neighborhood real estate market dynamics (Chapple 2014, Lester, Kaza et al. 2014) and have advanced the policy discussion in useful and important ways. A series of questions remain that examine the relationship between these manufacturing neighborhoods and surrounding redevelopment. In particular, what are the specific conditions related to redevelopment potential in these locations that might lead to potential firm displacement? Is there a varied response in vacant versus continuously occupied industrial sites? Are there specific redevelopment patterns that suggest an emerging potential for industrial gentrification? Is there a measured policy response that acknowledges appropriate land use conversion opportunities while preserving a city’s industrial base?

Using a case study of the Cortex Innovation District in St. Louis, MO, this paper will examine the relationship between neighborhood real estate dynamics and industrial location outcomes. The Cortex District was established in 2002 as a 503c3 non-profit with the mission to advance entrepreneurship through innovation and collaboration. It is a physical district on 200 acres in the central corridor of the City of St Louis. It sits on what was once a collection of small to middle sized manufacturing companies located just north of what was once a middle-income neighborhood. Previously a key contributor to thriving St Louis industrial economy, the location faced sharp economic decline during the latter half of the 1900s, into the early 2000s. The paper will examine the history of industrial land use patterns in the area, considering how redevelopment activities might have influenced its industrial decline. Using both historical analysis of past land using activities and a quantitative analysis of land use change, this paper will build a narrative of neighborhood change that aims to illuminate how cities can create better redevelopment practices. By including industrial development as a part of their overall land use plan, cities can maintain their industrial base while making room for redevelopment.

Citations


Key Words: Industrial Land, Manufacturing, Economic Development

**EXPLORING THE TRANSFORMATION OF BUSINESS STOREFRONTS FOLLOWING PASSAGE OF MEDICAL CANNABIS REGULATIONS IN OKLAHOMA CITY, OK**

Abstract ID: 1332

Research in Motion (RiM)
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Background: The legalization of medical and recreational cannabis dispensaries in the United States has created opportunities for new neighborhood commercial activity. As marijuana dispensaries open, they are replacing existing storefronts and creating new commercial space in cities that allow for their operation. Previous research has hypothesized that these dispensaries may act as a locally undesirable land use (LULU), clustering in low-income and majority-minority neighborhoods (Boggess et al., 2013). As the availability of cannabis dispensaries grows, others suggest that these locations offer opportunities for jobs, new economic activity, and local tax revenue (Doussard 2019). This too may cause concern as cannabis-related economic development may drive commercial gentrification as affluent cannabis users move into areas of relatively affordable real estate prices to compete with local entrepreneurial residents who may also benefit from growing cannabis economy (Van De Voorde et al., 2021).

While federal laws continue to criminalize the sale, possession, and use of cannabis, local authorities are often tasked with formulating rules, land use policies, and permitting processes as states permit the cultivation, processing, and use of cannabis. While voters and local planning officials continue to grapple with the broader effects of new cannabis industry, we can expect to see visual transformation in the physical environment, associated with new and changing storefronts. However, the evidence on how storefronts change in the face of cannabis industry growth is poorly understood. We used spatial and visual methods to understand how dispensaries are contributing to built environment transformations and neighborhood change in Oklahoma City, OK among two sets of neighborhoods to answer the questions: 1) What types of businesses are dispensaries replacing? and 2) Does this change differ in relatively low income communities versus relatively high income communities?

Methods: We identify the location of 345 dispensaries in Oklahoma City, OK between August 2021 and October 2021 using Weedmaps.com (Cao et al, 2020). Using ArcGIS Pro, we then map dispensaries as point locations and join them to 2019 US Census Bureau census tract boundaries for analysis of tract-level differences in retailer availability and storefront change. We use 2019 US Census estimates to categorize each dispensary according to poverty within the associated census tract based on quartiles of the percentage of individuals experiencing poverty. Using methods developed in previous analyses of retail change (Clarke et al., 2010), we search each dispensary address and use Google Street View (GSV) to compile photographs of the streetscape to visually verify dispensary locations and identify former businesses in newly-opened dispensaries. At each dispensary, we record the most-recent former non-marijuana business. If the location stood unoccupied for a long period of time then it was documented as “formerly empty.” Additionally, locations listed as “new building” had been recently constructed, had not sat empty for long amounts of time, and had no previous business inhabitants prior to the dispensaries. Former business categories include: car/electronics, beauty/health, food, clothes/jewelry, gas station, vape shop, industrial/trade, entertainment, loans/bonds, insurance, and miscellaneous.

Results: Preliminary results suggest that of the 345 dispensaries in our sample, 65 (18.8%) were located in census tracts in the highest income quartile and 93 (27.0%) were located in the lowest income quartile tracts. Additional results of this work are forthcoming and will be presented at the conference.

Citations


Key Words: cannabis, built environment, neighborhood change, Google Street View, spatial disparities

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**Track 3 Posters**

**AN ANALYSIS OF THE TYPES OF INDUSTRIAL STRUCTURE AND INTER-INDUSTRY CONNECTIONS THAT INFLUENCE URBAN DECLINE**

Abstract ID: 704

Poster

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Urban decline is a significant problem in a number of nations, and its causes can vary widely. Experts believe that the industrial aspect of a city or region is one of the most important factors in determining whether it will experience urban decline or growth. The relationship between industrial structure and urban decline is the subject of numerous theories, including the deindustrialization theory and the industrial diversity theory. When attempting to address municipal decline, it is crucial to pay attention to the type and diversity of industries in a region. Numerous governments employ regional strategic industrial policies designed to attract high-value-added industries, such as producer services and high-tech manufacturing, to combat urban decline. Although this strategy can be effective, it is essential to recognize that the manufacturing and service industries are complementary rather than competitive. To maintain the Industry Life Cycle, efforts must be made to improve the connectivity of industries within a region. There are few empirical studies that classify and analyze regions with similar industrial characteristics, despite the significance of industrial structure in addressing urban decline. Consequently, the purpose of this study is to classify regions with comparable industrial structures and examine the effects of industrial structure on urban decline in Korea. To conduct this analysis, the Multiple-Decline-Index was calculated for 226 local administrations in Korea and a correlation analysis was performed with the three-digit LQ index of the Korean Standard Industrial Classification. Based on the LQ index and industrial diversity of the derived industries, the study classified regions with comparable industrial structures and conducted a multiple regression analysis with industrial characteristics, industrial structure dummy variables, and interaction variables as explanatory variables and the Multiple-Decline-Index as the dependent variable. The level of urban decline is greater in regions with a service-oriented industrial structure type, while traditional manufacturing industries and high-tech manufacturing industries have a positive effect on urban vitality. The supportive nature of the service industry suggests that Metropolitan cities with excellent service industries must attract high-tech manufacturing industries, whereas non-Metropolitan cities with developed manufacturing industries can have a significant synergistic effect by attracting producer service industries. This study concludes that in order to increase urban vitality through regional industrial development policies, it is necessary to evaluate the region’s industrial composition as a whole. This includes simultaneously attracting sophisticated manufacturing industries and fostering producer service industries such as research and development. In addition, it is necessary to observe the urban decline problem in metropolitan areas and to propose solutions to increase productivity as a result of their low manufacturing specialization while maintaining their high service industry specialization. To be effective, urban decline policies...
should be tailored to the industrial structure of each region.

Citations


Key Words: Urban Decline, Industrial Structure, Interrelated-Industry

PLACE-BASED STRATEGIES FOR FOSTERING AND SUSTAINING INCLUSIVE INNOVATION DISTRICTS: CASE STUDIES OF EMERGING SMALL AND MID-SIZED US TECH HUBS
Abstract ID: 804
Poster

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The migration of remote-working tech workers to regions with a lower cost of living during the COVID-19 pandemic, followed by tech businesses looking to capitalize on new tech labor pools, has intensified tech activity in small and mid-sized metros in the Sunbelt and Mountain West regions of the US. This development lends strength to the practice of re-engineering city centers and commercial districts into innovation-igniting urban developments (Zandiatashbar and Kayanan, 2020) such as creative clusters, technology zones, clusters of innovation, and innovation districts for boosting economic competitiveness and growth in the knowledge-based economy. For example, innovation districts (Katz and Wagner, 2014) that host clusters of knowledge-based organizations (firms, universities, research institutes, etc.) in mixed-use, amenity-rich, and transit-served settings for facilitating encounters and interactions across diverse knowledge workers and networks and boosting innovation have emerged as a popular ‘traveling planning concept’ (TPC) (Healy, 2010).

In addition to luring economic investment, innovation districts are also desirable from a sustainable mixed-use development perspective. However, studies of Silicon Valley and other cities such as Boston, MA, St. Louis, MO, and Buffalo, NY (Zandiatashbar and Kayanan, 2020) have demonstrated that innovation-fostering mixed-use and amenity-rich clusters erode affordability and displace and exclude underserved people and communities in their vicinity. Research by Gómez and Oinas (2022) suggests that “landing processes”—the interventions through which a TPC is adjusted to suit local conditions and developmental objectives—are key for ensuring local innovators, small businesses, and underserved communities and residents are included in innovation-oriented economic development initiatives designed for embedding external investors and high-skilled workers into the local economy.

I will employ mixed methods (observation, semi-structured interviews, and secondary data analysis) within a comparative case study methodology to document place-based urban economic development interventions that embed new tech workers and businesses in the local economy without displacing and excluding local businesses and underserved communities. I will describe and explain the unique “landing processes” used to customize innovation districts or related innovation-igniting urban developments to meet the economic inclusion goals of three emerging small and mid-sized Sunbelt and Mountain West tech hubs. I will complete city (site) selection in June 2023 and present the preliminary results of fieldwork in one city in the poster. For example, I expect to demonstrate that inclusive innovation-oriented economic development is not limited to place-making in the
immediate neighborhood as is typically assumed (Gómez & Oinas 2022). Anticipated examples of a combination of economic and built environment interventions that foster underserved communities and local participation in the innovation economy are school-to-work programs, training, and upskilling of local residents to address skills gaps, establish career pathways, and unlock access to job opportunities within innovation districts; allocating affordable workplaces for local businesses and start-ups within innovation districts; introducing public transit connecting local and underserved communities to innovation districts, facilitating innovation-in-place to leverage the social capital and place identity of underserved communities and locations, expanding broadband infrastructure, tailoring finance for incubating home-based businesses in marginalized locations, etc. The poster will also include information about another outcome of the research—a public online repository of US and international place-based urban economic development initiatives that will serve as a body of knowledge and a platform for connecting scholars working on inclusive urban economic development.

Citations


Key Words: inclusive economic development, place-based innovation, landing processes for innovation districts
of each district in the city. Both parametric (Pearson’s correlation) and non-parametric (Spearman’s correlation) methods are used for the comparison. In addition, a brief geographical analysis is conducted to explain the distribution of the variables and their implications.

The findings from the study are as follows. First, variables of convenience stores are not correlated with the district’s happiness level, while those of cafés demonstrated a statistically significant correlation. Secondly, while the number of stores is positively correlated with happiness level, the correlation between the ratings and happiness level is negative. Lastly, the districts with higher ratings for the café are located outside of the city and the distribution was more discrete.

These findings bring about several implications. First, to objectively measure the happiness level, it can be strategic to employ the data of places where people spend more time. Secondly, though happier districts are found to have more Starbucks, the relationship between the two is still ambiguous. Lastly, the different distribution between happiness and the ratings for Starbucks may imply a transmittable attribute of happiness.

Citations


Key Words: Happiness, Google Map API

TASK-BIASED TECHNOLOGICAL CHANGE AND OCCUPATIONAL LANDSCAPE DYNAMICS IN LOCAL LABOR MARKETS OF KOREA: A SPATIAL SHIFT-SHARE APPROACH

Abstract ID: 1187
Poster

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Background and research questions: Recent discussions in the field of urban and regional planning have focused on two main features of structural transformation in the regional labor markets. The first concerns occupational structure and highlights the increasing importance of the regional context and spatial effects of neighbor interactions between regions (Herstad, 2018). This is due to the occurrence of varying external effects depending on regional characteristics and the differentiation of functions between regions (Vermeulen & Psenner 2020). The second pertains to the heterogeneous effects of structural changes on regional labor markets brought about by task-biased technological advancements, such as automation and computerization, which exhibit considerable variation across different regions. Specifically, the decrease in demand for jobs that involve routine tasks due to a high risk of job substitution and the increase in demand for jobs that involve non-routine tasks have led to variations in the structural changes of labor markets across regions, resulting in an exacerbation of differences in occupational composition between regions (Dengler & Matthes 2018; Crowley et al. 2021). Therefore, it is important to identify changes in the occupational landscape dynamics and contribute to the empirical literature on this topic. In this context, this study aims to address the following research questions: 1) Which occupations can be classified as requiring primarily routine or non-routine tasks? 2) How did the spatial clustering patterns of the
classified groups change across local labor markets in Korea between 2010 and 2020? 3) Which local labor markets, by occupational group, were most affected by the spatial effects of neighbor interactions between local labor markets?

Data and methods: We utilized data on the level of tasks by occupations from the Korean National Occupational Information System (KNOW) and calculated the routine task intensity index (RTI) to categorize occupations into two groups (highest and lowest) based on their RTI quartiles. To investigate the effects of spatial cluster change and occupational change on the classified groups, data from the Population Census from 2010 to 2020 provided by the Korean Statistical Information Service was used. A spatial autocorrelation analysis was conducted to examine the patterns of spatial cluster change across occupations. Furthermore, drawing on the spatial shift-share approach proposed by Montanis et al. (2021), we decomposed the spatial effect resulting from changes in both the occupational structure of a region and its neighboring regions and classified those regions according to the pattern of change by occupation type.

Results and contributions: According to the results, there is a strong linear relationship between the change in population density of the region and the share of classified occupations from 2010 to 2020. It was also found that the share of occupations in the top quartile of the RTI index continuously decreased, especially in high-density regions, which is a result consistent with the existing argument. As a result of the spatial autocorrelation analysis using a k-nearest spatial weights matrix ($k = 5$), it was found that a statistically significant amount of spatial autocorrelation in both the group with the highest RTI index and the group with the lowest RTI index exists. The results of regional classification according to the shift-share analysis suggest that the changes in a region’s occupational structure can also vary depending on the unique context of the region and the characteristics of the neighboring region. This is supported by the positive outcomes of both the neighborhood industrial mix effect (NIM) and neighborhood total effect (NTE) in the lowest RTI group, which mostly requires cognitive and face-to-face tasks. This study suggests the importance of a place-based policy approach to address the challenges posed by task-biased technological change and job displacement.

Citations


Key Words: Task-Biased Technological Change, Occupational Change Dynamics, Spatial Shift-Share Analysis, Exploratory Spatial Data Analysis, Local Labor Market
Track 4 – Environmental Planning & Resource Management

Track 4 Pre-Organized Session Summaries and Abstracts for the Sessions

COMMUNITIES’ EXPERIENCES TOWARDS CLIMATE JUSTICE
Pre-Organized Session 9 - Summary
Session Includes 257, 258, 260

Climate justice should be one of the pillars of climate change adaptation and mitigation strategies. And community engagement should be at the core of planning, implementing, and monitoring these strategies. It is well known that some vulnerable groups are disproportionately affected by climate change, facing social and institutional constraints on their ability to adapt. Hearing community voices in all stages of producing these strategies is imperative because it will bring resilience and sustainability to the solutions. By doing so, community members will feel a sense of ownership. This session will present case studies on how planners can better engage with community members when working on climate change-related projects. It will encompass three papers focusing on the following: 1) the hurricane effects on homeowners in Puerto Rico, 2) participatory action research to co-produce a decision-support tool in a rural context in Virginia, and 3) development of planning tools to increase climate adaptation and justice.

Objectives:

• understand different strategies to engage community member in climate change related projects.

AN EXAMINATION OF THE REPAIR, RELOCATION, AND RECONSTRUCTION PROGRAM (R3) AFTER HURRICANE MARIA IN PUERTO RICO
Abstract ID: 257
Abstract within Pre-Organized Session 9

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This mixed method study, based on over 100 surveys and interviews in Puerto Rico, explored the experiences of individuals who were affected by Hurricane Maria, and the factors that influenced their decision to relocate and apply for the Relocation and Reconstruction Program (R3). Questions assessed the impact of Maria on the home, the factors influencing relocation, the process of applying for and receiving assistance from R3, and the experience in the program. The survey also captured demographic information such as gender, age, income, and other pertinent information. Results from the survey will help inform decision-making in order to improve the relocation process for individuals affected by natural disasters. The survey also explored the issue of equity, asking questions about the culture of R3, its language accommodations, disability accommodations, and alternatives for people without personal transportation. The results from this survey will help to identify areas of inequity and inform decision-making to ensure a more equitable relocation process for those affected by natural disasters.
Citations


Key Words: Relocation, Buyouts, Disasters, Resettlement

“PEOPLE JUST WANT TO KNOW HOW CLIMATE CHANGE IS GOING TO AFFECT OUR LIVES”: CO-PRODUCING A DECISION SUPPORT TOOL TO ENHANCE CLIMATE EQUITY ON VIRGINIA’S EASTERN SHORE

Abstract ID: 258
Abstract within Pre-Organized Session 9

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Communities across the United States are increasingly grappling with the challenges of climate change while considering how needs should be heard and prioritized. Climate action planning has tended to focus on cities and not consider the most vulnerable stakeholders and those experiencing the greatest impacts. This paper critically reflects on participatory action research undertaken by the Eastern Shore of Virginia Climate Equity Project to co-produce a decision-support tool to increase equitable decision-making in a rural context with long histories of human trauma and environmental degradation that is now experiencing the growing impacts of climate change.

Virginia’s Eastern Shore was first settled by Europeans in the early 1600s and is a low-lying peninsula susceptible to a rising sea level, increasingly severe storms, and the gradual salinization of farmland and depleted groundwater resources. These growing physical impacts have disproportionately affected local Black geographies with plantation histories (Davis et al. 2019), along with also impacting migrant Latinx farmworkers and other stakeholders that have already been displaced by change. To bring these considerations together, the Climate Equity Project is funded by the National Science Foundation’s “Coastlines and People” initiative to build a decision-support tool linking scientifically assessed information together with residents’ lived experiences. The evolving tool is envisioned to take the form of an interactive Climate Equity Atlas that will be a repository of data to support residents’ decision-making processes. Promoting long-term community stewardship is the project’s underlying goal to improve climate equity – ensuring the fair and impartial distribution of climate protection benefits throughout the community that also alleviates unequal individual burdens.

A central tenet of the project is utilizing a co-production model that aims for the community to work in tandem with an interdisciplinary team of scholars. This model is meant to mitigate against the potential for ill-informed solutions that could exacerbate disproportionate impacts and is grounded in participatory action research methods implemented as a form of social practice (Kemmis and McTaggart 2005). Attempting to embody the
theories of critical climate justice (Mikulewicz et al. 2023), this project centers intersectionality and trust building through authentic power sharing with historically underrepresented groups (Wilson 2018, Fitzgerald 2022). Under the guidance of two community-based principal investigators, a Community Advisory Committee (CAC) has been formed to facilitate stakeholder engagement and interface with scholars from the University of Virginia, College of William and Mary, and Old Dominion University and from the fields of environmental science, engineering, planning, and biocomplexity science.

The paper analyzes the project’s formulation and the first year of community-engaged research conducted under this community-driven governance model. It considers the efficacy of this novel process to co-produce research questions via interactive workshops that facilitate a deeper understanding of the socio-environmental history of the region and of climate change’s direct impacts on residents, for instance regarding sunny day flooding, agricultural production, and jobs. The authors reflect on platforms being built to enhance youth and migrant farmworker voice in the work, and on challenges faced and opportunities produced through such work. It also considers best next steps to continue learning directly from and with those most impacted by climate change as the project moves into phases of refinement and dissemination.

Findings of the paper most relevant to planning scholarship inform best practices of how a decision-support tools and other planning documents can be co-produced with marginalized and rural communities. Community-driven work requires the decentralizing and balancing power, learning across and through difference, enabling creative participatory design processes, building capacity for equitable decision-making and shared stewardship, and fostering negotiated outcomes toward shared goals.

Citations


Key Words: equity, climate justice, co-production, participatory action research, decision support tool

PLANNING TOOLS TO INCREASE CLIMATE ADAPTATION EFFECTIVENESS AND JUSTICE: COMMUNITY-IDENTIFIED BENEFITS AND CHALLENGES

Abstract ID: 260
Abstract within Pre-Organized Session 9

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This article addresses the following research question: what benefits and challenges do residents perceive about the design and function of a tool intended to better link local knowledge to climate adaptation planning, for the purpose of increasing climate justice and planning effectiveness?
Complex and swiftly evolving systems such as climate change require planning processes and tools that rapidly incorporate diverse information flows to represent real-time impacts more accurately. Local residents represent one source of this needed new knowledge, as communities experience firsthand the effects of climate events such as flooding, wildfire, and extreme heat. In addition, climate justice scholarship finds that meaningful engagement in climate adaptation planning by frontline communities furthers climate justice and improves plans and plan outcomes.

Inclusion of local knowledge about climate events into planning presents one pathway towards improving climate adaptation outcomes as well as potentially increasing procedural, distributive, and recognitional justice for marginalized communities. Residents often have critical information about characteristics of climate events, harms they cause, and potential solutions. For example, residents may know which neighbors need assistance with evacuation, the most appropriate place to site a disaster response center, or which stormwater systems frequently fail. They also may be able to more quickly anticipate how climate adaptation may deepen climate injustice, such as a green infrastructure installation causing displacement through rapidly rising property values. As a result, integration of local knowledge into climate adaptation planning can contribute to more effective and just planning outcomes by complementing traditional data sets with time sensitive and context dependent information.

However, although residents’ lived experiences and participation can improve overall plan quality, climate adaptation planning often does not include local knowledge. Frontline communities often have limited opportunity to participate in climate adaptation planning, even while experiencing the most climate risk. In response, municipalities, community-based organizations, researchers, and communities have identified the need for tools and processes to better link everyday knowledge about people’s experiences of climate events to climate adaptation planning.

This article seeks to address this gap in part by presenting findings from five workshops held with community members during a National Science Foundation-funded community-based participatory research project focused on co-designing a climate adaptation planning tool and process centered. Thirty members of the Climate Navigators, a group of community members trained in climate preparedness and community organizing by a community-based organization (Go Austin, Vamos Austin), participated in the workshops. Climate Navigator members reside in a predominantly Hispanic/Latinx, low-income neighborhood experiencing repeated and severe flooding, increasing urban heat, and growing air quality impacts from wildfires. Workshops were semi-structured and focused on identifying and prioritizing opportunities and challenges related to the design and function of tools intended to better link local knowledge to climate adaptation planning. Participants were also invited to complete a follow-up survey.

Workshop notes and survey results were translated into English and then coded into key themes through several rounds of analysis by multiple researchers. These themes elucidate participants’ perceptions of opportunities and challenges related to connecting community members’ lived experiences to climate adaptation planning. After describing these themes, we then outline next steps for community-driven ideas about how to link local knowledge most effectively to climate adaptation decision making. Our findings are relevant for planning scholars and practitioners considering how to integrate local knowledge into climate adaptation planning, as well as for residents seeking tools and structures that can be used to increase preparedness and response. In addition, the community engagement processes developed by this project may be helpful for other communities in the US exploring how to address climate injustice through increased power, participation, and knowledge sharing in climate adaptation planning.

Citations


Key Words: climate justice, climate adaptation, participatory planning, local knowledge, planning tools

URBAN CLIMATE JUSTICE: URBAN CLIMATE JUSTICE: NEW METHODS OF MEASUREMENT
Pre-Organized Session 10 - Summary
Session Includes 50, 51, 52, 53

This session addresses two questions: To what extent are cities incorporating equity and justice goals into their climate action planning? and What data and methodologies are needed to assess a city's progress on climate justice? Focusing on energy, Pitt and Alexander report on their content analysis of comprehensive or master plans from 20 U.S. cities, as well as those cities’ most recent sustainability or climate action plans. They discuss their system for scoring the plans and the extent to which they address energy justice. Fitzgerald presents the methodology she and her team developed for an assessment of Boston’s climate action. Her discussion will focus on nine barriers to achieving climate and equity goals, including limited jurisdiction, conflicting goals, and funding. Meerow, et. al. combines two methodologies to examine how networks of plans shape urban heat resilience in Tempe and Tucson. After scoring the plans they map them to evaluate the spatial distribution across neighborhoods. Cannon et. al. evaluates planning procedures in 25 cities to empiricize ways cities can pursue more inclusive climate adaptation planning.

Objectives:

• To learn about which cities are linking equity and justice to climate action and how they are doing it.
• To understand the strengths and weaknesses of different approaches to assessing climate action and equity.
• To explore assessment of planning processes and outcomes in climate equity planning.

THE METHODOLOGY AND POLITICS OF ASSESSING URBAN CLIMATE ACTION AND EQUITY
Abstract ID: 50
Abstract within Pre-Organized Session 10

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At least 35 of the 50 largest US cities have climate action plans but far fewer track their process toward achieving goals. Equity is seldom seriously integrated into climate goals and when it is it is often vaguely defined and not attached to specific goals. I recently led a team that completed one of the first external assessments of the climate action of a major city, Boston. My goal here is to describe how we developed and employed the methodology. In this paper I discuss the process of developing a framework for evaluating urban climate action that is rooted in equity and justice.

The purpose of this exercise is four-fold. First, it sets up an accountability and accomplishment framework to create an ongoing practice of data-informed assessment of climate progress. Although improved reporting and
assessment are urgently needed to better understand progress, reliable and relevant data are not often accessible. Second, we attempted to measure the extent to which goals are being achieved equitably. Third, we sought to understand barriers to progress to inform policy decisions at higher levels of government. We identified a set of nine potential barriers to achieving climate goals and examined the extent they were evident. Fourth, we aimed to catalyze a conversation among city officials and communities to take the actions needed to accelerate climate action equitably.

Before evaluating the stated goals of the plan it is necessary to determine whether the plan’s actions can achieve its stated goals, a surprisingly common shortcoming. Examining equity in implementation is complicated by the fact that climate plans are typically one of several plans with equity goals—assessments have to look beyond the one plan to examine equity. Focusing on barriers takes the focus from “is the city achieving goals” to “why or why not is the city achieving goals.”

Citations


Key Words: climate justice, plan assessment, equity measurement
energy transition find that energy transitions inevitably create “winners and losers” (Carley and Konisky, 2020, pg. 569), often further entrenching existing inequities. We will explore scholarship on how planners can ensure energy justice within the transition, including how they can effectively commit to the redistribution of resources, benefits, and risks that arise from the renewable energy systems (Burke and Stephens, 2017; Carley and Konisky, 2020; Hughes and Hoffmann, 2019). We will also draw on the work of energy democracy scholars to unpack questions of how and why marginalized communities should have decision-making power and control over the life-cycle of renewable energies (Burke and Stephens, 2017; Teron and Ekoh, 2018).

Our methodology is inspired by prior studies that analyzed municipal planning documents to evaluate the extent to which cities are preparing for sustainable development (Berke and Conroy, 2000), adopting innovative climate action practices (Bassett and Shandas, 2010), or incorporating equity and justice into climate action plans (Schrock, et al., 2015). Similar to those studies, we conduct a methodical content analysis of the comprehensive or master plan from 20 U.S. cities, as well as those cities’ most recent sustainability or climate action plans. Our analysis includes a points-based system for scoring plans based on the extent to which they address energy justice and democracy in their existing conditions or recommendations sections. We then follow up the quantitative scoring with deeper, more qualitative examinations of how energy justice and democracy are discussed in certain selected plan documents.

These findings will provide an understanding of whether U.S. cities are centering matters of equity, justice, and democracy as they prepare for their role in the clean energy transition. It will also set the stage for further research analyzing the characteristics of the cities that are most effectively incorporating those objectives into the clean energy transition, as well as for detailed qualitative research on planners’ and city officials’ perspectives on the role of cities in this transition.

Citations


Key Words: Energy, Sustainability, Equity, Climate

INSTITUTIONAL DESIGNS FOR PROCEDURAL JUSTICE AND INCLUSION IN URBAN CLIMATE CHANGE ADAPTATION
Abstract ID: 52
Abstract within Pre-Organized Session 10

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As cities increasingly recognize the need for more social equity and justice-focused climate adaptation actions, much emphasis has been placed on efforts to redress unequal exposure to climate impacts, structural socioeconomic vulnerabilities, as well as the maldistribution of risk burdens. Although these engagements with distributive equity concerns in the context of climate change are paramount, corresponding analyses of the processes that underpin them – including various institutional arrangements, decision-making procedures, and the actors, ideas, and power structures that drive procedural inequity – remain comparatively abstract. There is broad consensus that more inclusive and representative processes are needed in climate adaptation planning; however, it is not clear how cities can (or should) redesign rules, institutions, and decision-making processes to lay the groundwork for operationalizing (re)distributive outcomes. Developing just climate policy is further compounded by the difficulty in measuring equity in climate adaptation planning. To help inform cities’ efforts in this area, this paper evaluates different planning procedures and institutional arrangements found across 25 U.S. cities that aim to facilitate more inclusive planning and decision-making in the context of climate adaptation. Although arrangements depend on the place, specific climate impact, and political context of each city, institutional designs broadly fall into four categories: cross-sectoral partnerships, strategic collaborations, grassroots-driven engagements, and expansive co-governance arrangements. Each institutional design leads to different inclusion outcomes with differing extent and depth of focus on tackling structural inequities. Our results empirically the different ways cities can pursue more inclusive climate adaptation planning, and highlight the opportunity space for cities to advance and implement broader procedural equity goals.

Citations


Key Words: climate change adaptation, urban planning, decision-making, procedural equity, inclusion

COMPLEMENTARY PLAN EVALUATION METHODS FOR ASSESSING EQUITABLE HEAT PLANNING: A CASE STUDY OF TEMPE AND TUCSON, ARIZONA

Climate change and the urban heat island effect are increasing the imperative for communities to equitably plan for urban heat resilience. Cities in the desert Southwest are among the hottest and fastest warming in the US, placing them on the front lines of heat planning. Urban heat resilience requires an integrated planning approach that coordinates strategies across the different plans that shape the built environment and risk patterns, termed
the network of plans. Because heat exposure differs across communities and certain populations disproportionately suffer from heat impacts, equity should be central to heat planning. This study is the first to combine two emerging plan evaluation approaches to examine how networks of plans shape urban heat resilience in Tempe and Tucson, Arizona. The first methodology, Plan Quality Evaluation for Heat Resilience, adapts existing plan quality assessment approaches to the specific challenges posed by heat hazards. We assess whether nine plans from the two cities meet 56 criteria across seven principles of high-quality planning and the types of heat strategies included. We summarize plan quality results by plan and by principle to identify strengths and weaknesses. The second methodology, the Plan Integration for Resilience Scorecard™ (PIRS) for Heat focuses on policies in the plans with the potential to mitigate heat in the built environment. We categorize all relevant land use policies identified in the nine plans by policy tool and heat mitigation strategy and score them based on their heat impact. Scored policies are then mapped to evaluate their spatial distribution and the combined effect of the plan network on different neighborhoods. The resulting PIRS for Heat scorecard is compared with heat vulnerability indicators to assess policy alignment with risks. We present the results to officials in both cities so that they can use them to inform future plan updates. Finally, we compare the results of these two complementary plan evaluation methods, showing that combining them provides a more comprehensive understanding of how plans address heat and identifies opportunities for more equitable heat resilience planning.

Citations


Key Words: Urban heat, plan evaluation, climate change, plan quality, network of plans

ADDRESSING SOCIAL EQUITY AND RACIAL JUSTICE IN CLIMATE ADAPTATION AND COMMUNITY RESILIENCE: EMERGING PERSPECTIVES AND RESEARCH METHODS
Pre-Organized Session 17 - Summary
Session Includes 485, 486, 487, 489

Research has long established that socially vulnerable populations are likely to experience the most severe impacts of climate change and natural hazards as well as have limited resources to adapt and respond to these impacts. This session brings emerging research methods and perspectives in examining the risk and resilience of vulnerable communities facing the challenge of global climate change. We invite papers that use innovative methodologies and grounded theories to better understand the pressing challenges facing communities and how the risks associated with global climate change could interact with existing socioeconomic vulnerability. We welcome quantitative and qualitative studies on topics including, but not limited to methods in quantifying the risks and burdens faced by vulnerable communities under climate change; Social equity implications associated with climate change and adaptations such as implications for mobility, housing, education, public health, etc; Compounded challenges facing climate change from the aspects of infrastructure, land-use, and public policy interventions from local to federal levels.

Objectives:
CLIMATE GENTRIFICATION IN HOUSTON AFTER HURRICANE HARVEY: WHAT ARE THE ROLES OF LOCAL ENVIRONMENTAL PLANS?

Abstract ID: 485
Abstract within Pre-Organized Session 17

ZHAI, Wei [University of Texas at San Antonio] wei.zhai@utsa.edu, presenting author

Research Questions: Urban planners are increasingly turning to local environmental improvement plans as a means of addressing climate change and environmental justice concerns. Many communities are demanding changes in local land use policies to prioritize these issues, including Houston, Texas, which has issued several environmental improvement plans in recent years following the devastating Hurricane Harvey. However, these efforts could inadvertently contribute to gentrification, particularly in long-standing overburdened neighborhoods. While previous studies have identified disasters as potential drivers of gentrification (Inzulza Contardo et al., 2018; Weber and Lichtenstein, 2015), little is known about the role of local environmental plans in this emerging issue. To address this gap in the literature, this study aims to answer the following research questions:

If the neighborhood gentrified after Hurricane Harvey associated with damage the neighborhood encountered?
If the local environmental plans have made an impact on climate gentrification?

Approach and methodology: The primary objective of this study is to assess the extent of gentrification in Houston, TX following Hurricane Harvey, using street view images and American Community Survey data. Specifically, the study will evaluate various dimensions of the neighborhood environment (including wealth, liveliness, depression, safety, boredom, and beauty) for each property. To achieve this, the Place Pulse 2.0 Dataset will be trained, and the street view of all flooded properties will be evaluated before and after the hurricane to measure the degree of gentrification. Additionally, property values will be used to validate the gentrification outcomes derived from the street view images. A secondary aim of the study is to investigate the association between property damage during Hurricane Harvey and the measured level of gentrification. This will help determine whether properties with higher levels of damage are more likely to be gentrified. The study will also explore environmental justice by examining the links between the degree of gentrification, levels of disaster damage, and socioeconomic factors of neighborhoods. Finally, the study will conduct a content analysis of three local environmental plans: the Houston Brownfields Strategic Plan (2017), Climate Action Plan (2020), and Houston’s Incentives for Green Development (2020). This analysis will explore the extent to which these plans have contributed to post-Harvey gentrification.

Findings: My study yielded three key findings. Firstly, I discovered a positive association between damage and the likelihood of a neighborhood gentrifying in Houston. This finding aligns with previous research conducted in New Orleans after Hurricane Katrina (Van Holm and Wyczalkowski, 2019). Secondly, gentrified neighborhoods are more likely to experience improvements to their physical environment. Finally, I identified a greater number of policies in Houston’s Incentives for Green Development program that have contributed to post-Harvey gentrification. Overall, this study sheds new light on the intersection of disaster recovery, environmental justice, and gentrification.

Citations


Key Words: Climate Gentrification, Environmental Plan, Environmental Justice, Hurricane Harvey

BOTTOM-UP GIS TO UNCOVER ENVIRONMENTAL AND CLIMATE INJUSTICES IN INFORMAL NEIGHBORHOODS: THE CASE OF A FREEDMEN'S TOWN IN NORTH TEXAS.

Abstract ID: 486  
Abstract within Pre-Organized Session 17

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Though informality is understood as a problem unique to the Global South, emerging research is uncovering informal housing as a strategy utilized by low-income communities across the globe (Roy, 2005). In the United States, informality has primarily been studied in rural, Mexican-descended communities along the Mexico-U.S. border but is increasingly being identified amongst low-income, peri-urban, unincorporated neighborhoods throughout the country (Durst, 2019). Because of intentional underbounding or disregard on the part of municipalities, these communities face multiple compounding precarious conditions including lack of access to basic amenities and infrastructure, and poor-quality housing. Lack of attention from planners likewise exposes these neighborhoods to multiple types of environmental injustices related to climate change (Rivera et al., 2022; Tippin, 2021).

This study puts forward a participatory GIS mapping of informality and environmental/climate injustices in a peri-urban informal neighborhood in North Texas. Bottom-up GIS and humanities methodologies provide empirical evidence of multiple types of environmental injustices and extreme climate events—such as illegal dumping and wildfires. A freedmen's town in Dallas County was chosen to highlight the usefulness of these methods for understanding environmental and climate injustices in informal, and other low-income, neighborhoods. “Freedmen’s Town” has lacked access to municipal water, sanitation, and waste collection since its founding in 1878. The lack of basic services continues today due to underbounding to avoid infrastructural costs and county officials use of a FEMA floodplain designation. County displacement through the floodplain designation has caused drastic population decline, but nonetheless Freedmen’s Town has become a refuge of affordability for low-income people of all races—African American, Latino/a/x, and white residents. Those that remain in the neighborhood face increasing vulnerability to environmental and climate injustices due to deteriorating housing stock and lack of infrastructure caused by underbounding and the floodplain designation (Rivera et al., 2022; Tippin, 2021).

Our research uses participatory GIS approaches because data from publicly available sources, such as the American Community Survey and county appraisal district data, is not accurate enough to document the dynamic characteristics of informality. Importantly, our participatory action research incentivizes the engagement of residents in the co-production of spatial maps that draw from local knowledge and insurgent planning (Talen, 2000). This study draws from data collected through extensive fieldwork conducted over summer 2022 and spring 2023. The first phase of research included the use of a GPS device to document informal land uses; the distribution of illegal dumping sites; and the impact of extreme climate events. The second phase of the fieldwork included surveys documenting implications of environmental injustices for residents' living conditions, as well as oral histories and photovoice to document residents’ experiences of environmental and climate injustices with pictures and stories. Finally, we use ArcGIS Urban and StoryMaps as a digital platform to develop a dynamic grassroots map of environmental injustices occurring in this informal neighborhood.

Our research seeks to expand the scarce literature on informality that overly focuses on colonias in the US-Mexico border by documenting environmental and climate injustices in a freedmen’s town in North Texas. Importantly, this research on the Global North is informed by insurgent maps developed by planners and residents of informal
settlements in Latin America (Sletto et al., 2010), which empower community-based organizations to confront misguided policies that seek to displace residents from the communities they developed. As informal neighborhoods become more visible in the US due to in affordability in housing markets (Durst 2019), this research will serve as a reference to understand low-income residents’ environmental and climate struggles and their adaptation strategies.

Citations


Key Words: Informality and Insurgent Planning, Environmental Injustice, Participatory Mapping, Freedmen's Towns, ArcGIS Apps

SPATIAL REGRESSION IDENTIFIES SOCIOECONOMIC INEQUALITY IN MULTI-STAGE POWER OUTAGE RECOVERY AFTER HURRICANE ISAAC

Abstract ID: 487
Abstract within Pre-Organized Session 17

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Socio-economically vulnerable communities often experience worse recovery outcomes compared to less vulnerable communities (Ulak, Yazici, and Ozguven 2020). These communities can take longer, and, in some cases, even fail to return to the pre-disaster baseline. Prolonged lack of access to infrastructure services, such as power, after a disaster, can also have negative health, social, economic, and mental consequences (Coleman, Esmalian, and Mostafavi 2020). Therefore, a poorly managed recovery process can perpetuate the disempowerment of marginalized groups (Sovacool, Tan-Mullins, and Abrahamse 2018). Understanding and addressing uneven recovery efforts is critically important for equitable resilience and disaster management.

Hurricanes frequently produce power outages in the United States. Outage data can signal how the short-term infrastructure recovery process is managed in the aftermath of a disaster (Guikema et al. 2014). When faced with widespread outages, utilities often take a standardized and utilitarian approach by prioritizing repairs restoring power to the greatest number of clients as quickly as possible, or in some cases, restoring outages that affect the provision of vital services. However, vulnerable populations may have less access to adaptation methods such as backup generators or temporary relocation, in which case, even an “objective” recovery prioritization approach...
may fail to address restoration vulnerabilities (Chandrasekhar et al. 2019). Regardless of the approach, there is a level of subjectivity inherent to the decision-making process that can produce inequalities in restoration outcomes.

We conduct a spatial analysis of customers experiencing outages and power recovery time in Louisiana after Hurricane Isaac (2012). Our primary research questions are (1) Does socio-economic inequality contribute to more severe impacts from a natural disaster in terms of proportion of customers experiencing power outages? If so, to what extent are the effects explained by differences in the spatial variation in storm strength? (2) Are spatial variations in socio-economic inequality associated with differences in recovery speeds after Isaac? If so, can these effects be explained by differences in storm strength and/or presence of high priority infrastructure (e.g., hospitals and emergency services)?

Our work is novel in several ways. First, we use spatial regression, accounting for spatial autocorrelation, to identify the direct, indirect, and total effects of each variable on power outages and recovery times. This approach lends insight into the unique ways that socioeconomic conditions interact with power outage recovery across space. Our research is also unique in that we conduct analysis on both the magnitude of power outages (represented by proportion of customers experiencing outages) and recovery times, meaning time for customers to have access to power again, across multiple stages (50%, 80%, and 95% recovery). Much of the previous quantitative work on post-disaster power outages has focused on either magnitude of disruptions or the time to recovery, but not both. This also provides us with a more complete view of how Hurricane Isaac affected the power system in Louisiana and how recovery efforts were administered.

We find that median income is a significant predictor of the time it takes to restore 50%, 80%, and 95% of the total outages within a ZIP Code Tabulation Area (ZCTA), even after controlling for hurricane characteristics and total outages. Higher income geographies and higher income adjacent geographies experience faster recovery times. Our findings point to possible inequities associated with income in power outage recovery prioritization, which cannot be explained by exposure to outages, storm characteristics, or the presence of critical services such as hospitals and emergency response stations. These results should inform more equitable responses to power outages in the future helping to improve overall community resilience.

Citations

- Ulak, Mehmet Baran, Ayberk Kocatepe, Lalitha Madhavi Konila Sriram, Eren Erman Ozguven, and Reza Arghandeh. 2018. “Assessment of the Hurricane-Induced Power Outages from a Demographic,
ARE REDLINED NEIGHBORHOODS EXPERIENCING CLIMATE GENTRIFICATION? EMPIRICAL ANALYSIS OF RESIDENTIAL MOBILITY PATTERNS IN MIAMI

Abstract ID: 489
Abstract within Pre-Organized Session 17

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There is a growing consensus that the racially biased discriminatory zoning practice called ‘redlining’, implemented by the federal government during the 1930s, exacerbated the racial residential segregation. Redlining discriminated against people of color and immigrants in mortgage lending as racial identity and ethnicity were key components in determining mortgage eligibility. Mortgage lending which favored non-Hispanic Whites propelled ‘white flight’, a phenomenon indicating large scale migration of whites in cities to newly developed single-family homes in the suburbs. On the contrary, non-Hispanic Blacks were consistently discriminated against mortgage lending and confined to declining and disinvested urban areas with poor housing conditions (Chapple et al., 2017).

For the last several decades, however, many downtowns and central districts in the US have experienced population increase, especially among young and non-Hispanic whites, reversing the decades of population decrease (Lee, 2020). This population gain in urban centers is often led by urban revitalization that features high-density residential development, vibrant space for culture and entertainment, and walkable streets (Ryberg-Webster & Kinahan, 2014). This so-called “back-to-the-city movement” unexpectedly causes gentrification (Hyra, 2015) and considering that previously redlined neighborhoods are largely located near downtown, historically redlined neighborhoods may be vulnerable to gentrification.

In the case of Miami, climate-induced gentrification also threatens once redlined neighborhoods. According to Keenan et al. (2018), the relocation of upper-income residents from lower-lying areas to inland areas with higher elevations to hedge against flooding leads to climate gentrification and displacement of lower-income residents. Non-redlined neighborhoods are mainly located in low-lying areas, whereas redlined neighborhoods are clustered in inland and higher elevation areas. Therefore, empirical study is needed to confirm whether redlined neighborhoods in Miami are exposed to climate gentrification.

Miami as a case study, this study confirmed to what extent previously redlined neighborhoods are experiencing gentrification and whether we can call it as climate gentrification. Gentrification status was defined by referring to the change in housing and socio-economic characteristics (median housing value, median-household income, and education status) at block group level in between 2012 and 2019. To confirm climate gentrification, this study analyzed residential mobility pattern in gentrified neighborhoods by using block-group level migration data from the Data Axle.

Findings from this study show that the gentrification process occurring at Miami are not associated with historic redlining practices. Both redlined and non-redlined neighborhoods were both exposed to gentrification in a similar degree. Based on the analysis of residential mobility patterns, this study failed to confirm the presence of climate gentrification. Among 8818 new households that relocated to gentrified neighborhoods in between 2012 and 2019, only 1319 households were from Florida. Furthermore, there was no clear indicator, which confirms those 1319 households are from low-lying areas exposed to flooding.

This study concludes gentrification in Miami is linked to gentrification caused by urban development in downtown
areas rather than climate-induced gentrification.

Citations


Key Words: Redlining, gentrification, climate gentrification, residential mobility pattern

GOVERNING WATER INFRASTRUCTURES FOR EQUITY AND SUSTAINABILITY

Pre-Organized Session 39 - Summary
Session Includes 349, 350, 351, 352, 353

Water service providers worldwide face challenges in extending water coverage to low-income and water-insecure communities to meet sustainable development goals. They continue to develop diverse governance models in their respective political-economic, socio-ecological, and regulatory contexts to balance service coverage expansions with environmental protection, water resource availability, cost-effectiveness, profit, and service efficiency. This session presents emerging water utility and service governance models like fair market valuation of utilities, water affordability and assistance programs for low-income households, and the inclusion of supplementary decentralized sources in water supply systems. Empirical case studies from diverse contexts across Latin America, India, and the US examine which governance models advance affordability, equity, resilience, and ecological sustainability goals to offer lessons for water infrastructure planners.

Objectives:

- Identify emerging governance models for water resources, water utility, and water service provision across diverse global contexts
- Critically analyze the relationships between identified governance models, equity, and sustainability

BALANCING CONSERVATION AND INFRASTRUCTURE: THE ROLE OF ENVIRONMENTAL ORGANIZATIONS IN IMPROVED WATER AND SANITATION Provision in GALÁPAGOS, ECUADOR

Abstract ID: 349
Abstract within Pre-Organized Session 39

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What role do environmental conservation organizations (ECOs) play in facilitating or hindering access to improved water and sanitation services? How do they decide their role and what actions do they take to promote their view across different levels of government? Through a review of historical documents and interviews with key informants in Galápagos, Ecuador, I analyze the conflict that ECOs face in balancing wilderness conservation,
increasing human populations and tourism pressures, and growing needs to create more sustainable water and sanitation systems capable of withstanding increased climate uncertainty. The actions these organizations take have profound implications for the residents of islands where infrastructure development has been limited.

Since the creation of the Galápagos National Park and the Charles Darwin Foundation in 1959, efforts to preserve the areas that were not yet colonized have at times clashed with the needs of residents, leading to both increased social discontent and the ecological degradation of a very fragile environment (González et al., 2008). Today, freshwater availability is insufficient to meet human demand, requiring the use of desalination plants, and wastewater management is largely non-existent (CARG, 2021). Water desalination compounds risks (Lassiter, 2021) while untreated wastewater impacts both human and environmental health (Nelson & Murray, 2008).

The literature on ECOs and water has focused on the role these organizations play in biodiversity and protecting water resources through payments for ecosystem services, support for nature-based solutions, and similar water management efforts (Mandle et al., 2019). This paper expands on this literature by examining how ECOs’ views and actions towards water and sanitation infrastructure development impact both human health and environmental wellbeing. I find that these organizations move between lobbying for increased restrictions on human activities and piloting small-scale solutions which cannot be scaled-up to meet current and expected water needs. Restrictions have deleterious impacts on ECO-community relations which are ultimately a disservice to their biodiversity conservation mission. I argue that given the political and economic forces at play in places like Galápagos, and growing concerns due to climate change impacts on water quantity and quality, ECOs’ repertoires of action to protect the environment should extend to polycentric partnerships with communities and governments to ensure water and sanitation infrastructure are developed in a way that protects both human and non-human environments.

Citations


Key Words: Environmental conservation, Water and sanitation, Climate resilient infrastructure, Latin America, Global South

UNTAPPED TRANSFORMATIVE POTENTIAL IN OFF-THE-GRID SUPPLEMENTARY GROUNDWATER SOURCES THAT IMPROVE HOUSEHOLDS’ RESILIENCE IN INDIAN WATER-SCARCE URBAN ENVIRONMENTS

Abstract ID: 350
Abstract within Pre-Organized Session 39

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Decentralized, off-the-grid, supplementary water sources are increasingly being promoted to help cities and regions meet sustainable development goals for water (Misra & Kingdom, 2022). Planning scholars have observed that decentralized supplementary water sources complement utilities to help water-insecure residents maintain water access and remain resilient when facing water scarcity (Shrestha et al., 2018; Dakyaga et al., 2022). Further, they argue that, in some cases, community participation in the governance of these decentralized supplementary sources contributes to community development (Das, 2016; Spencer, 2022). This paper builds on this literature to ask: How does the planning and everyday governance of these supplementary groundwater sources achieve ‘transformative resilience’ (cf. Ziervogel et al., 2017; Macmillan et al., 2021), which involves changes to gender, ethnicity, caste, and citizenship-based systems of marginalization that circumscribe water access and participation in governance?

My research is situated in Tiruppur, India, where most residents rely on decentralized, off-the-grid supplementary groundwater sources to remain resilient to water scarcity. The study uses longitudinal (month-long) daily water access data produced by participating households (n=94) through a participatory action research project to investigate intra-household gender differences in access to supplementary groundwater sources. These access data were combined with household surveys of participating households, direct observations, and semi-structured interviews with supplementary water infrastructure managers to uncover about a dozen distinct typologies of supplementary groundwater sources based on ownership and governance across the city. The analysis first examined how these supplementary sources improve water security for water-insecure households. I also analyzed how the identified typologies challenged gender, caste, and citizenship-based inequalities and power asymmetries in water governance and access across the surveyed households.

Findings indicate that all the supplementary groundwater sources helped households, including those connected to the utility network, remain resilient to water scarcity. However, regardless of private or public ownership, the governance of these groundwater sources continues to largely reproduce gender inequalities in water access, with women assuming a greater share of the physical and emotional labor for achieving household water security. Moreover, through their complex access rules, privately owned and managed groundwater sources become an additional means of oppressing lower caste, low-income, and migrant households, even if they improve water security and resilience. Finally, publicly owned and managed groundwater systems create some avenues for women to participate in water governance, build solidarities across differences, and access the state to improve water access, just as they allow the local political state to build patronage (cf. Bjorkman, 2015). In conclusion, this paper argues that publicly owned and managed supplementary groundwater sources hold the untapped potential for realizing transformative resilience in water-scarce environments. However, to realize this potential, planners and policymakers must reimagine alternative governance structures that empower women, oppressed castes, and migrant residents in everyday water governance.

Citations

IMPLEMENTING EQUITY IN PRACTICE: FEDERAL ASSISTANCE TO LOW-INCOME HOUSEHOLDS FOR DRINKING WATER AFFORDABILITY IN THE U.S.

Abstract ID: 351
Abstract within Pre-Organized Session 39

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The water affordability crisis in US cities predates COVID but has been exacerbated by it. As early as 2016, the non-profit group Food & Water Watch sounded the alarm in a report that showed that among water utilities in 70 cities, the proportion of households facing water shutoffs was as high as 15%. Based on those findings, as many as 1.4 million Americans are considered at risk of experiencing a water shutoff. The Low-Income Household Water Assistance Program (LIHWAP) is the first dedicated federal low-income water assistance program in the US aiming to address this challenge. The U.S. Department of Health & Human Services administers LIHWAP by distributing funds to sub-national entities (e.g., States, federally-recognized Tribes, etc.), which in turn determine the methods and requirements for working with utilities and distributing the funds to low-income households. Since the LIHWAP program began disbursing funds in 2021, sub-national grantees have leveraged different approaches to distributing funds in order to reach low-income households—to varied effect.

In this paper, we examine the routes taken by two States demonstrating high efficacy in distributing funds to help address the water affordability concerns facing low-income households: Virginia and Kentucky. Our questions center on examining what eligibility requirements were established and which distribution approaches were pursued in each State, how they were implemented, why, and to what end. In the case of Kentucky, State LIHWAP administrators were able to leverage existing in-State distribution networks to get funding to households in need. Virginia instead leveraged innovative third-party external distribution support to the same end. We examine the rationales for in-house versus external distribution approaches, the eligibility requirements that each followed, the challenges and opportunities both distribution circuits present, and the lessons learned from these two leading State LIHWAP performers. Our paper leverages a mixed-methods approach to examining how Kentucky and Virginia became LIHWAP leaders, specifically tapping on LIHWAP quarterly distribution data starting in September 2021 and ending in September 2023, State LIHWAP implementation plans, semi-structured qualitative interviews with LIHWAP administrators at the federal and state levels, and subnational-level distribution partners within each State—including community action agencies, water utilities, and third-party assistance providers.

Our findings indicate that variations in four factors influenced the approach, but not the effectiveness, that each State took in regulating and distributing federal LIHWAP dollars. These include the flexibility of extant State technology management systems, the institutionalization of industry-based relationships, extant human resource capacities of local-level distribution partners, and the aggregate volume of State-distributed federal assistance portfolios managed by local-level partners. These explanatory variables are critical to understanding how the design and implementation of new assistance programming might effectively reach low-income households experiencing water debt burdens in US cities. In answering these questions, our research identifies some of the main drivers behind effective sub-national distribution practices for the potential permanence of federal funding for water affordability, as well as for distributing newly available federal infrastructure systems funds from the US Infrastructure Investment and Jobs Act.

Citations
• Food and Water Watch. 2018. America’s Secret Water Crisis: National Shutoff Survey Reveals Water Affordability Emergency Affecting Millions. Available at: https://www.foodandwaterwatch.org/insight/americas-secret-water-crisis

Key Words: water, affordability, LIHWAP, federal assistance, distribution

FAIR MARKET VALUE AND THE FUTURE OF US PUBLIC DRINKING WATER SYSTEMS
Abstract ID: 352
Abstract within Pre-Organized Session 39

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Historically, US public drinking water systems have been valued based on their book value. Fair Market Value (FMV) is an approach being used as an incentive for acquisitions of water and wastewater utilities. FMV rejects book value (depreciated original cost) as the standard sale price for water/sewer systems and injects market-driven exchange value into public utilities. Cities are built on use value, but financialization is emphasizing exchange value at the expense of the welfare of residents (Molotch 1976; Harvey 1978). The use of FMV legislation has accelerated in the past decade. California reintroduced fair market value into the water utility lexicon when it passed the Public Water System Investment and Consolidation Act of 1997. Between 1997—when California adopted FMV—and 2013, no state legislatures passed laws adopting FMV as a standard for valuation of acquired utilities. Yet in the past ten years, eleven additional states have signed on to this policy.

States that have adopted Fair Market Value include California, Illinois, Missouri, Indiana, New Jersey, Pennsylvania, Iowa, Maryland, North Carolina, Ohio, Texas, and Virginia (Kline 2021). States that have rejected Fair Market Value include Connecticut, Kentucky, Tennessee, and Florida (Kline 2021). We have collected data on state policies, both those successfully passed and rejected in the legislature, and want to know what is driving this shift in state policy. Using a mixed methods approach we will examine factors differentiating state policy and qualitatively explore the process by which these regulatory changes are implemented. We are interviewing stakeholders impacted by the introduction of Fair Market Value acquisitions. These include public utility regulators, lobbying groups, advocacy groups, elected officials, water operators, industry analysts, and appraisers.

This research is important for planners concerned about public drinking water system investment, affordability, and long-term trends in the governance of public water systems. Variations in this policy across states could have an impact on ratepayers whose water and/or sewer systems were acquired under this process. Under Fair Market Value laws, the acquiring company of a water utility can include the “fair market value” of the purchased system in its rate case, meaning that ratepayers ultimately pay for the sale of their own system and utilities earn a return on that value. This built-in rate-increase mechanism may have an uneven impact across income groups and geographies. Indeed, a study of the 500 largest water systems found fair market value contributed to higher prices and less affordability in some states (Warner et. al. 2022). Planners needs to be aware of the impact of the adoption of Fair Market Value on low-income communities and customers.

Citations

Key Words: Drinking Water Systems, Value, State Policy

IS ASSISTANCE GUARANTEEING ACCESS TO WATER? AN ASSESSMENT OF WATER ASSISTANCE PROGRAMS IN BRAZIL AND MEXICO
Abstract ID: 353
Abstract within Pre-Organized Session 39

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Water and sanitation services’ affordability is a pressing issue worldwide, as low-income households are forced to make tradeoffs between water and other vital goods and services. Increasing privatization pressure and rising costs of service provision have drawn renewed attention to this issue. Although there is widespread recognition of the importance of water affordability, few studies have analyzed affordability programs in Latin American countries, and even fewer have systematically examined their scope and extent. This paper addresses this gap by focusing on practical examples of assistance programs in the nine capitals of northeastern Brazil and the largest cities in Mexico, such as differentiated tariffs and specific social programs provided by utilities. The paper first provides a general overview of assistance programs across the region and then delves deeper into specific programs. Through website scraping, content analysis, and interviews with water managers and public officials, this study relies on publicly available information on water utilities and their affordability programs to provide a systematic review of affordability mechanisms in place in these regions. This paper assesses how and where these mechanisms are implemented, examining aspects such as ownership structure, the form of administration, types of programs, tariff rates, and eligibility requirements. Our findings show the need for a federal-level government framework as there are wide differences in the enrollment requirements, large variations in water rates, and assistance provided. The paper concludes with recommendations to establish a main framework with criteria that can guide the program design and implementation of policies and programs addressing water affordability, a critical issue for planning and development agencies, local governments, and water managers seeking to ensure water security.

Citations

RESILIENCE PLANNING IN A CHANGING CLIMATE: COMPARING LOCAL APPROACHES
Pre-Organized Session 46 - Summary
Session Includes 439, 442, 1137

Local communities are at the forefront of combating climate change. While climate change has been thought of as a collective action problem at a global scale, scholars also argue that local governments are more efficient and familiar with local knowledge. The complexity of global climate change and diversity across regions and localities suggest the need for more comparative research on local policy processes and planning strategies that enhance local government capacity for climate change adaptation. Comparative analysis of innovative climate policy instruments may generate new solutions, allowing lessons to be drawn across different local contexts. This panel convenes an international comparative scholarship on local climate policy and resilience planning to explore these issues, showcasing innovative practices and cutting-edge methodologies. Five papers will examine resilience planning in different local contexts. The papers provide case studies on resilience planning and adaptation approaches for confronting hazards and climate change in Houston, Texas; the Brazilian Amazon; multiple cities in California; and Nijmegen, the Netherlands.

Objectives:
- Local Resilience Planning Innovations in Different Countries and Regions
- International Climate Adaptation Approaches
- Disaster Planning/Disaster Management for Urban Areas

PLANNING TO EXACERBATE FLOODING: EVALUATING A HOUSTON, TEXAS, NETWORK OF PLANS IN PLACE DURING HURRICANE HARVEY USING A PLAN INTEGRATION FOR RESILIENCE SCORECARD™
Abstract ID: 439
Abstract within Pre-Organized Session 46

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In August 2017, Hurricane Harvey inundated Houston, Texas, where flooding already was a persistent and growing challenge. Coordinated, proactive land-use planning has been shown to help mitigate flooding hazards, whereas conflicting guidance can exacerbate the problem. This study used the Plan Integration for Resilience Scorecard (PIRS)™ method to spatially evaluate the network of plans that was guiding land use and development in western Houston when Harvey struck, assessing their integration and effects on flood vulnerability.

Despite generally positive results, we found important variations and conflicts across plans and across the study area. By encouraging development without sufficient attention to flood risk, some plans and policies increased vulnerability, especially in places outside the official 100-year (1% annual chance) floodplain but still in danger of flooding. A false sense of security provided by local flood control structures may have amplified the consequences by enabling more intensive development—an example of the safe development paradox—and making the area
even more vulnerable to cascading effects from a massive and sustained precipitation event like Harvey.

Citations


Key Words: Flooding, Spatial plan evaluation, Urban planning, Safe development paradox

MAKING ROOM FOR THE RIVER: CLIMATE ADAPTATION PLANNING IN THE NETHERLANDS
Abstract ID: 442
Abstract within Pre-Organized Session 46

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In this study we analyze plan integration for flood resilience in the city of Nijmegen, the site of the largest Room for the River project in The Netherlands. Little is known about the degree to which local and regional plans are coordinated with the national Room for the River program or about the cumulative influence of plans on flood vulnerability. To effectively investigate these issues, we use and build upon the Plan Integration for Resilience Scorecard™ (PIRS) concept and method, which analyzes the consistency and effects of networks of plans on community vulnerability. We expand the scope to include plans from multiple administrative scales and the focus to include environmental vulnerability. Using a three-phase evaluation process, we demonstrate that Room for the River policies are well integrated in Nijmegen’s network of plans, particularly with respect to flood safety and natural protection. However, we also find that policies at different administrative scales lack consistency in some places, some socially vulnerable neighborhoods receive comparatively little policy attention, and local plans often prioritize development over flood resilience, though higher tier plans sometimes make up for these policy gaps. Flood resilience is still finding its way in the Dutch planning system.

The PIRS™ offers planning practitioners a method to assess how networks of plans influence community vulnerability and, as demonstrated in this analysis, to determine the degree to which plans at multiple administrative scales target the most physically, socially, and environmentally vulnerable geographic areas. It can be used to support the ambitious goals of a program like Room for the River and align them with local development priorities.

Citations


Key Words: flood resilience, hazard vulnerability, land use planning, plan integration

BRIDGING PLAN CONFORMANCE AND PLAN PERFORMANCE: UNDERSTANDING THE IMPLEMENTATION OF CLIMATE ACTION PLANS IN CALIFORNIA
Abstract ID: 1137
Abstract within Pre-Organized Session 46

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Understanding when and how do plans matter is one of the key questions in urban planning. Plan conformance scholars have developed in-depth discussions about elements which constitute a good plan, such as an ambitious but feasible visioning statement, monitoring and implementation mechanisms, and genuine participation channel, etc. While plan performance scholars focus more on the factors in the planning process, such as the fiscal, technical and managerial capacity of local agencies. However, there is generally lack of implementation studies that connect both sides of story and comprehensively examine factors that leads to successfully plan implementation. How will the quality of plan influence plan implementation? To what extend will the planning process factors influence the implementation of a “good” plan?

In this research, we address this gap and empirically examine the implementation of climate action plan in 170 California cities. Building on theory of plan conformance, plan performance and policy implementation, we formulate a framework to examine the effectiveness of climate action plan implementation: plan quality, plan update, plan monitoring and planning capacity (technical, civic and managerial), etc. These hypotheses are tested based on a novel dataset which we compiled through content analysis of climate action plan, planning agency data from California annual planning survey, social-economic data from American Community Survey, facility-level emission data from GHG Facility and Entity Emissions, and local government finance data from census of government, etc. Our staggered DID analysis shows that plan quality factors only influence climate action plan implementation in the short-term. What really makes a plan effective in the longer term is the monitoring mechanisms and planning capacity factors.

Overall, our results show the importance of monitoring and capacity in plan implementation. It leads important implication enhancing plan performance in practice.

Citations

Key Words: Plan implementation, Climate action plan, Plan conformance, Plan performance, Local government

MULTIDIMENSIONAL INVESTIGATIONS OF POST-DISASTER COMMUNITY RELOCATION
Pre-Organized Session 61 - Summary
Session Includes 615, 616, 618, 1272, 1302

Post-disaster relocation is not a dichotomous choice between relocation or staying in place but instead follows a circuitous and complex path. Yet, research has paid surprisingly little attention to complexities and stakeholder interdependencies underlying relocation. This session aims to present a set of disaster relocation studies all focused on one research site (two communities in Puerto Rico affected by the 2017 hurricanes) and conducted over the same time frame but using different methodological approaches, namely community surveys, key informant interviewing, PhotoVoice and Role Playing Games. In the process, the session highlights the benefits of conducting mixed methods, coordinated and contemporaneous research for the understanding of complex urban problems. Studies in this session were funded through a National Science Foundation award (2032838 & 2032974),

Objectives:

• To understand various dimensions of post-disaster community relocation.

POLICYMAKING FOR COMMUNITY RELOCATION IN PUERTO RICO AFTER 2017 HURRICANE MARIA
Abstract ID: 615
Abstract within Pre-Organized Session 61

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Disasters displace households. Once people find places of refuge, they must decide whether—and how—to return to their homes or to move elsewhere. Planners and government officials often propose permanent relocation to escape the ongoing hazard risk in locations struck by disaster. Sometimes, however, relocation conflicts with other important aspects of community recovery, such as livelihoods, attachment to place, access to services, and social networks. Thus, household decisions in response to post-disaster relocation and reconstruction policies involve complex mixes of actions and reflect a myriad of factors, such as characteristics and potential consequences of the natural hazard, individual risk perception, balancing of hazard risks against the benefits of social and economic networks, monetary costs of repair versus relocation, actions of nearby residents and businesses, and effectiveness of government assistance policies.
This research is part of a larger study of dynamic stakeholder decisions on relocation within an uncertain and evolving institutional policy context, using the case of Puerto Rico following Hurricane Maria. The primary focus of the research is the R3—Home Repair, Reconstruction, or Relocation—Program, first announced in the May 10, 2018 public comment draft of the CDBG-DR Action Plan for recovery following the September 2017 storms. This program proposed to repair homes that were less than 50% damaged, rebuild significantly damaged homes not located in floodplains, and relocate households from significantly damaged homes in floodplains. Because the program would not fund elevation in place, it proposed to force relocation of thousands of flood zone households—on an island where approximately 17% of homes are in mapped flood zones—to existing vacant homes or parcels elsewhere on the island.

This paper will review the evolution of the R3 program since 2018: critiques, the sudden closing of applications in May 2020, implementation, and policy changes. In addition, it has been affected by the larger recovery contexts, including the proposed CDBG-DR community planning programs, FEMA individual and household assistance grants, and FEMA mitigation grants, each of which has faced a variety of difficulties. Furthermore, the recently approved $8.3 billion CDBG-MIT action plan includes additional programs for planning, and funding for home elevations and relocation that will follow the current R3 program.

Finally, it is important to understand the context of floodplain development and past relocation efforts in Puerto Rico. Previous flood and landslide events have led to relocations of homes and communities, and the actions and perceptions of those participants color the ways in which the government and residents see the current policies. Notably, while the R3 program struggles to successfully move households to safer locations acceptable to them, the self-managed relocations of approximately 1,000 households in El Caño Martín Peña in San Juan is successfully proceeding within the context of a community land trust.

Planning history matters. The ongoing policy and implementation history of the R3 program, within the broader contexts of post-Maria reconstruction and previous relocation efforts in Puerto Rico, can provide important lessons regarding design and implementation of relocation programs in hazardous areas.

Citations


Key Words: Community relocation, Disaster recovery, Puerto Rico

ASSESSING HOUSEHOLD RELOCATION INTERDEPENDENCIES USING SURVEYS IN PUERTO RICO
Abstract ID: 616
Abstract within Pre-Organized Session 61

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Household relocation is a complex decision process that involves consideration of multiple factors including decisions of other community stakeholders and changing conditions of the built and natural environment. Extant research on post-disaster recovery has examined some of these recovery interactions to an extent, for example,
the interlinkages between household and business recovery as well as between household recovery, business recovery, and restoration of the built environment. But these studies provide for only limited understanding of relocation decisions of households in part because they: (i) focus on the broader recovery process as opposed to the rather distinct relocation process itself; and, (ii) do not account for other actors (such as nonprofits and governments) or other environmental factors (such as risk perception) in the post-disaster context. As such there remains a need for research that more directly studies the interactions between relocation decisions and the multiple environments with which they are made—including physical/natural, social and policy environments.

This study aims to improve understanding of the extent to which household relocation decisions are dependent on a household’s interactions with the social, physical, natural and institutional recovery environment. Data for this study was collected through a random sample survey of households (n= 302) in two communities of Puerto Rico (Comerío and Loiza) that were affected by the 2017 Hurricane Maria. Data was collected in-person between May-October 2022. The survey questionnaire collected data on sociodemographic profile of households, disaster impact, sources of recovery financing and information seeking behaviors, factors considered during relocation/reconstruction, participation in the official Repair, Reconstruction, or Relocation (R3 program). We performed Principal Component Analysis and Multinomial Logistic Regression Analysis on dataset to determine the extent to which decisions to relocate are affected by five factors, namely, (i) availability of aid and ease of application; (ii) physical restoration of neighborhood; (iii) restoration of social infrastructure in the neighborhood; (iv) peer and place-based factors; and (v) perception of future hazard risk to home and neighborhood. The results of this study can be used by planners to understand the drivers of household relocation decisions in post-disaster contexts and to mitigate adverse impacts of household displacement through thoughtful and comprehensive recovery planning.

Citations


Key Words: disaster, relocation, household

MODELING COMMUNITY RELOCATION INTERDEPENDENCIES THROUGH ROLE PLAYING GAMES IN COMERIO, PR

Abstract ID: 618
Abstract within Pre-Organized Session 61

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Serious Role Playing Games are relatively new to disaster studies, but present a powerful methodology to not only comprehend complex interactions underlying stakeholder decisions but also build trust, empathy, and effective communication between participants. This project uses Role Playing Games (RPGs) as a way to advance scientific knowledge of the factors that affect community relocation decisions of households and businesses in highly uncertain and emergent physical and institutional recovery environments. Its specific aims were to investigate the
following: (i) resources households and businesses use to make relocation decisions; (ii) the inter-dependencies between household and business relocation decisions in the aftermath of disaster events; and, (iii) the dependence of household and business relocation decisions upon the actions of governments, nonprofits or volunteer groups.

The RPGs used in this study were designed based on fictionalized accounts of recent disasters in Puerto Rico and are played out in two parts: a household disaster scenario and a community disaster scenario. RPG scenarios were tested and validated through focus group discussions with planners and community leaders prior to deployment. RPG participants (n=20) were chosen to represent a diverse set of stakeholders (such as community residents, business owners, city planners). Game play is done with one stakeholder set at a time which was preferred by the community. Data collection included capturing each player’s interactions with other stakeholders and the reasoning behind each relocation decision during and after the game play. Structured observation during the RPG is used to log verbal and non-verbal exchanges and behaviors related to the following elements: (i) stakeholder decisions; (ii) translation of various uncertainties into stakeholder decisions; (iii) the reaction of a stakeholder to decisions of other stakeholders (e.g., a homeowner responding to the decisions of businesses and nonprofits); and, (iv) decisions with respect to the relocating the community (or not) under different decision scenarios. Lastly, a group evaluation is conducted to further understand stakeholder inter-dependencies, assess challenges faced by stakeholders in the decision-making process, and to verify that our understanding of the decision system reflects their understanding.

This RPG study uses a community engaged method to explore various household and community level decisions under various institutional and uncertainty scenarios (e.g., future flooding, storm surge or earthquake events) as well as presents an opportunity for collaborative learning among the game participants which could positively benefit community recovery.

Citations


Key Words: disaster, role playing, community based participatory methods, recovery, Puerto Rico

USING PHOTOVOICE TO DEVELOP JUST, PLACE-BASED UNDERSTANDING OF COMMUNITY RECOVERY IN COMERIO, PR

Abstract ID: 1272

Abstract within Pre-Organized Session 61

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After a series of natural disasters and an economic crisis, the Caribbean nation of Puerto Rico needs innovative recovery approaches that engage and support communities in facing a cascade of disaster-induced challenges. FotoVoz (PhotoVoice), a community-focused visual arts methodology based on social justice and mutual support, has been effective in fostering positive conditions for the recovery and well-being drawing on existing knowledge and resources in communities.

With the objective of developing a community-based understanding of recovery, a multidisciplinary group of academics and community volunteers in the rural town of Comerío, Puerto Rico, carried out a PhotoVoice/Foto Voz project to identify, describe and visually represent challenges and opportunities with the purpose of developing alternatives for future responses to disasters and other related problems. Through collaboration between the community organization Casa Juana Colón, the University of Puerto Rico, and Florida International University, thirteen women residents of Comerío and surrounding towns participated in FotoVoz workshops, took photographs of their lives and conditions, and developed narratives evocative to accompany them. The resulting exhibit was organized around themes developed through the analytical workshops and refined by a team of ethnographers who used the sessions to study how communities engage in visual and social analysis for health promotion. Themes were used to focus the photographs and included topics such as: water management; healthy homes, access to health care; security; social belonging; and rehabilitation of abandoned spaces. Drawing on participatory and social justice pedagogy, the group developed a photo exhibit to communicate, educate, and advocate for change that addresses the identified challenges.

The findings of this FotoVoz project suggest the need to expand ties between the community and universities to facilitate community participation and empowerment during disaster recovery. The project provides an interdisciplinary community-based model that unites the visual arts with social research to foster post-disaster recovery.

Citations


Key Words: PhotoVoice, Disaster, Recovery, Justice, Equity
El Chamizal was the subject of an international land dispute between Mexico and the United States that lasted for about 100 years. This conflict initiated in 1864 when the Rio Bravo -called Río Grande in the United States- abruptly changed its course toward south of the border, encompassing more than 333 hectares of land belonging to Mexican citizens. Mexico reclaimed this land called El Chamizal, but since the Río Bravo was considered the natural international boundary, The United States refused to return it. Testimonies from that time, even claimed that the new territory was “the act of God “and rejected the possibility of returning it to Mexico. During this time, the Comisión Nacional de Límites y Aguas or International Boundary and Water Commission emerged as a bilateral planning entity to solve this territorial dispute. Even though a court had granted the return of the disputed land, the United States refused to comply with that order. It was in 1964 when the dispute was settled, and part of El Chamizal was returned to Mexico. The land was designated as public space and since then it became one of the few and largest parks in the industrial city of Ciudad Juárez. Currently, different private interests are threatening the recreational and community uses of El Chamizal. About 19 land loans have gradually decimated its surface, its dimensions, and its green area. In response, different environmental and citizens movements are opposing the projected building of a Convention Center in the federal lands of El Chamizal. In order to protect it and preserve it as open space, the citizens organizations, Árboles en Resistencia (Trees in Resistance) and el Frente en Defensa de El Chamizal (Front in Defense of El Chamizal) propose that the area be considered as “public, cultural and ecological heritage”, be nominated as a Historic National Park, and, consequently, that uses not pertaining to those of a public and open space be eliminated.

Using the literature on land grabbing, privatization of land, social movements, and historic preservation, this paper delves into the history of the constant threat to territory that communities face either internationally or locally. Interviews with planners, activists, and community leaders inform the planning process in a divided place such as the Mexico-United States border and in a divided society as the industrial city of Ciudad Juárez. It examines the community efforts to achieve the goals of the right to space and rights to history and identity. Even though the United States returned part of the area of El Chamizal, now local and bilateral elites are trying to reappropriate it in the name of economic development, and to privatize it to build a megaproject in a city with scarce open space, but with available vacant land. Those economic forces are pushing for land grabbing and privatization, provoking a movement for the preservation of open space and memory.

Citations

DRAWING THE LINES: AN INTERGENERATIONAL AND CROSS-FIELD PLANNING DEBATE ON CLIMATE ADAPTATION POLICY

Abstract ID: 189
Roundtable

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HOLMES, Tisha [Florida State University] ttholmes@fsu.edu, participant

In this roundtable, an intergenerational and interdisciplinary group of planning scholars will consider the most pressing questions in contemporary climate adaptation policy. Using the structure of a facilitated debate, the scholars will engage their various disciplinary lenses to discuss current policymaking, decisions, and implementation in the US.

The intergenerational and interdisciplinary representation is a unique feature of this roundtable that reflects the field’s diversity. Planning scholarship and practice in the US have explored the nexus of climate change’s effects within the profession for at least two decades (Solecki, Leichenko, O’Brien 2011; Carmin, Nadkarni, and Rhie 2012). Early climate adaptation planning was informed by work from numerous disciplines, particularly social geography, hazard management, and public budgeting (Cutter, Boruff and Shirley 2003; Kousky and Schneider 2003; Fothergill and Peek 2004). The body of work has expanded to include perspectives from economics, land use, housing, governance, and environmental studies (Van Zandt et al 2012; Kahn 2013; Lyles, Berke, and Smith 2014; Martín and McTarnaghan 2018). More recently, planning scholarship has included other chronic hazards such as flooding, heat, or drought, and incorporated previously understudied geographies and populations and their life outcome disparities (Pierce and González 2017; Hino, Field, and Mach 2017; Holmes and Butler 2021; García 2022). Critically, this expanding diversity of work affirms planning’s role in advancing the social objectives of equity as much as its geo-spatial practice.

Despite the myriad of fields contributing to climate adaptation planning, the direct interaction with public policy and policymakers across this scholarship has been modest at best (Shi and Moser 2021). Much of the early exploration of climate adaptation planning anticipated the changing demography and landscapes from acute climate-related effects largely through the lens of public hazard policy—particularly national disaster mitigation policy. This lens constrained planners’ interaction with climate policy and continues to play an outsized role in the laws, program rules, and budgets of US government. Building off the legacy of that planning scholarship, this roundtable convenes six scholars working across the multiple fields that have informed adaptation planning over the last three generations of adaptation-related scholarship.

The panelists will focus on the policy challenges faced by national, state, and local officials that are most prevalent in current legislation and advocacy position papers. For each debate, the moderator will present a local case study from recent media headlines and name relevant policy positions from elected officials. With this background information, the panelists will then respond to a discussion question. To ensure adequate time for each discussion theme, fifteen minutes of debate will be allotted to each of the following five questions:
Should policymakers acknowledge, identify, and prioritize historical inequity and cumulative disparity in climate adaptation plans if an exposure is modest, and how? Which should policy prioritize in current household assistance programs for climate adaptation and hazard mitigation: deepening the amount and quality of assistance for certain households or increasing the breadth of households? What role should resident awareness and access play in communities whose governments have no resources to act? Which criteria should be included in policymakers’ decisions to adapt or retreat communities, and the quantity of investment for either? How deeply should any one level of government (e.g., national, state, or local) be responsible for climate adaptation plans? Ultimately, the roundtable will leverage multiple disciplinary and generational lenses inherent to planning scholarship to survey the wealth of knowledge on climate adaptation and to address pressing policy debates.

Citations


Key Words: climate, adaptation, policy

BARRIERS AS HIGH AS SEAWALLS: CONTEXTUAL AND REGULATORY CHALLENGES FOR COMMUNITY FLOOD ADAPTATION

Abstract ID: 269
Roundtable

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Communities are increasingly aware of the need to adapt to climate change. In doing so they take steps to seek resources and to implement policies that will help them prepare for and respond to extreme weather events. In undertaking such adaptive action, communities often face significant obstacles. These obstacles are contextual, regulatory, and at times the expression of broader systemic injustice and inequality.

This roundtable will provide a space to discuss the contextual, regulatory and systemic barriers that communities encounter when undertaking climate adaptation efforts. Panelists will provide insights into the barriers that
communities have encountered to access and spend resources for climate adaptation and disaster recovery. The roundtable will also discuss how pre-existing land-use regulations and top-down policies that come with a suite of conditional requirements to access resources may exacerbate challenges for community-based planning and circumstantially stymie climate adaptation efforts. Delving into these challenges, presenters will also provide clues as to why communities do or do not undertake certain climate adaptation approaches. The roundtable will discuss these challenges as they emerge across urban locales across the U.S., paying particular attention to New York City and New Orleans.

The roundtable will take a panel interview format with two facilitators. The roundtable will start with a brief introduction to the roundtable topic. Subsequently, panelists will be interviewed by the facilitators. The panel interviews will start with one member discussing the experiences of the Gentilly Resilience District in New Orleans and the challenges that the community faced in utilizing federal resources for the implementation of climate adaptation initiatives. These insights will then be coupled with community experiences in New York City (NYC). Building on existing research, a second panelist will share the preliminary findings of a survey administered to 1200 coops in NYC on their experiences with flooding and access to resources geared for disaster response. The discussion will also explore the barriers that Black and Latino residents had to overcome by challenging pre-existing policies and land-use regulations when devising new flood mitigation solutions in the Rockaways community in NYC. The discussion will close with the presentation of recent findings from two additional studies on incentives and barriers to climate adaptation: A cross-national study of cities, including NYC, that surveys local policymakers’ and residents’ preferences for climate adaptation actions along five dimensions of justice; and a U.S.-wide study that systematically explores characteristics that may influence whether or not communities participate in federal flood mitigation programs.

An interactive question and answer session will follow, during which participants will have the chance to shape and enrich the discussion with their insights, questions, and comments. The Q&A portion of the session will be moderated by the facilitators and will employ a mix of interactive tools such as ‘Poll Everywhere’. The interactive part will have a section in which participants can both ask questions and make comments either by name or anonymously. The objective of this interactive part of the session will be to: further reflect on the identified barriers; elaborate on new perspectives that need to be considered when examining such barriers, particularly from planner and resident viewpoints; and elucidate and crystalize potential ways forward.

Citations


Key Words: Climate adaptation, Community resiliency, Resilience challenges, Flood planning, Barriers

**OPPORTUNITIES AND CHALLENGES FOR ENVIRONMENTAL PLANNING UNDER THE BIDEN-HARRIS ADMINISTRATION**

Abstract ID: 806
Roundtable
The Biden-Harris Administration is prioritizing progress and providing significant investment on climate change at an unprecedented level. Taking a whole-of-government approach (by engaging multiple federal departments besides the Environmental Planning Agency), the Administration has successfully created 67 environmental policies and proposed 60 more by March 2023 (Eilperin, et al. 2023). Some major milestones include: setting the goal of a 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas (GHG) pollution in 2030, using the social cost of GHG in rulemaking, proposing emission and corporate disclosure rules for power generation and heavy industries, supporting a comprehensive approach to decarbonizing buildings and energy, and creating the Justice40 Initiative to prioritize communities most impacted by climate change, pollution, and environmental hazards. To support those newly created goals and programs, the federal government is making “once-in-a-generation investments” toward environmental conservation, clean energy, and climate change, such as the Agricultural Conservation Easement Program and the Regional Conservation Partnership Program, as well as multiple carbon programs.

Notably, the Biden-Harris Administration has reframed and integrated climate actions into various programs such as national security, infrastructure, public health, housing, and economic development. For example, the Infrastructure Investment and Jobs Act (2021-2022) and the Inflation Reduction Act (2022) directed financial support for clean energy, clean water, and equity-centered environmental investments. The implementation of federal policies and disbursements of the multi-billion-dollar fund clearly involve complex societal interconnections and trade-offs, many of which are yet to be carefully examined.

Moderated and interactive discussions in this roundtable aim to advance environmental planning research, teaching, and practice at the local and community level in response to the rapidly evolving federal regulatory programs. This roundtable will engage the audience and draw upon the strengths of a transdisciplinary group of speakers in environmental law and policy, hazard and resilience planning, health impacts, infrastructure and land use planning, material and waste management, renewable energy, and resource conservation. Roundtable speakers and participants will be invited to share their observations, experiences, strategies, and lessons learned from their respective field of work. Special attention will be paid to the trade-offs of environmental policies and programs across environmental media (e.g., air, water, and land), across communities (e.g., urban vs. rural), across geographical locations and scales (e.g., coastal vs. inland, neighborhood vs. city), and across various planning goals (e.g., equity, efficiency, climate mitigation and adaptation).

Citations

ACSP-AESOP ROUNDTABLE DISCUSSION: CHALLENGES AND OPPORTUNITIES OF INCLUSIVE CLIMATE ACTION PLANNING IN EUROPE AND AMERICA

Abstract ID: 954
Roundtable

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RECKIEN, Diana [University of Twente] d.reckien@utwente.nl, participant

This pre-organized session seeks to bring practitioners and scholars from Europe and America into a conversation about inclusive climate mitigation and adaptation planning. Cities across the globe are examining ways to better engage their communities in climate action planning to develop an inclusive response to climate change. An inclusive climate action planning process involves many steps requiring community partnership and collaboration. These may include but are not limited to empowering the community to identify their needs, priorities, and concerns; examining innovative opportunities; addressing potential barriers to action; analyzing the distributional impacts of climate impacts and policies on disadvantaged and advantaged communities; implementing strategies to mitigate GHG emissions and help communities adapt to climate impacts; and tracking progress toward goals. This roundtable discussion brings practitioners who are working in the climate planning space together with researchers who explore the best practices of inclusive climate planning to discuss challenges and opportunities to develop and implement inclusive climate action plans. The discussion may focus on the following:

1) Assessing community-led projects to help advance climate equity, such as active transportation, renewable energy, urban greening, and more.

2) Exploring innovative local or regional action to engage frontline communities in climate action.

3) Measuring and addressing climate impacts, such as heat waves, wildfires, and flooding on vulnerable and disadvantaged communities.

4) Examining how the benefits of cap-and-trade and/or carbon taxation are distributed among advantaged and disadvantaged communities.

5) Analyzing community access to energy incentive programs, clean mobility options, affordable housing near transit and employment centers, and more.

6) Investigating how local and community-led actions align with regional, state, or national level climate policy and emissions reduction targets.

7) Identifying accessibility gaps associated with data and GHG emissions inventory tools for climate planning at the local and regional levels.
8) Reflecting on best practices of incorporating local communities into climate planning processes.

Citations


Key Words: Climate Action Planning, Climate Mitigation, Climate Adaptation, Greenhouse Gas Emissions

Track 4 Individual Paper Submissions

ACHIEVING “NO-NET-LOSS OF WETLANDS” NATIONAL GOAL THROUGH INTEGRATED PLANNING APPROACH: LEARNING FROM THE 112 COMPREHENSIVE PLANS IN NEBRASKA

Abstract ID: 24
Individual Paper

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In the U.S., federal and state agencies have made dramatic efforts to protect and restore wetlands. Local jurisdictions play a critical role in wetland conservation since wetlands are often located adjacent to water bodies such as rivers, streams, lakes, and coastal waters which play important roles for local communities. The U.S. federal government’s requirements and guidance for wetland conservation are reflected in a series of federal laws, regulations, and policies. However, the degree to which these requirements are reflected in local planning efforts is unclear. This study evaluates how well wetland conservation efforts are integrated into the 112 local comprehensive plans in Nebraska, USA. This study addressed two specific research questions: (1) How well do the local jurisdictions in Nebraska integrate wetland conservation into local comprehensive plans? How can the integration of wetland conservation into local comprehensive plans be improved? (2) The results show that the majority of local comprehensive plans pay little direct attention to wetland conservation, although many conservation efforts are conducted under the umbrella of environmental protection frameworks. The indicators include water resource protection received the highest score and was the descriptor of natural or environmental resources and resulted in the highest level of local awareness on natural assets. The indicator of setting goals for no net loss of wetlands received the lowest score among all indicators, demonstrating a clear gap between the national vision and the local reality of wetland conservation. Findings suggest local governments need more direct and proactive inputs to improve wetland conservation. Further findings from this research provide a practical roadmap for planners globally, particularly for the developing countries, to integrate wetland conservation into the local planning systems.

Citations


Key Words: Local comprehensive plan, wetland conservation, plan integration

ROOTS OF URBAN EQUALITY: ARE LOW-INCOME NEIGHBORHOODS PAYING MORE FOR STREET TREES?

Abstract ID: 33
Individual Paper

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Hedonic studies have demonstrated the economic impact of street trees on the housing market, while environmental justice studies advocate for 'Just Green Enough', emphasizing a balanced approach during urban greening when facing displacement. To better inform tree-planting initiatives to simultaneously promote environmental justice and enhance neighborhood greenery, it is crucial to understand if trees across neighborhoods with different income levels have different impacts on their property values, and if so, to what extent?

The present research investigates the influence of street trees on the single-family housing market in Seattle between 2010 and 2020, specifically examining the various effects of street trees across different income-level neighborhoods. It further discusses the policy implications for promoting environmental justice in urban tree-planting endeavors. We use street tree planting data and housing transaction records from Seattle between 2010 and 2020, covering 61,055 housing transactions, and four buffer lengths are applied to associate street trees with individual housing parcels and transactions. The relationship between street trees and the single-family housing market is assessed through linear regressions and spatial lag models using Spatial Two-stage Least Squares (S2SLS). Subsequently, the marginal implicit price is calculated and analyzed spatially. The study concludes that street trees are valued more in the housing market of low-income areas, and that community-based intervention in the tree-planting process is needed to guarantee environmental justice.

Citations


Key Words: Street trees, Housing, Low income, Environmental Justice
ENVIRONMENTAL JUSTICE IN ENERGY TRANSITION: MEASURING EFFECTIVENESS OF CLEAN TRUCKS ON THE LOCAL AIR QUALITY IMPROVEMENT FOR THE OVERBURDENED POPULATION

Abstract ID: 70
Individual Paper

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This study examines just transitions in freight transportation with a focus on how port policies regarding port-generated emissions can be transformed to ensure a cleaner environment for the local community. This paper examines effectiveness of the port environmental policy by observing the changes in NO2, O3, and PM2.5 concentration levels of vulnerable groups living near the port terminals. I examine the effectiveness of clean truck policy on environmental health disparities in low-income, minority neighborhoods comprised predominantly of Black and Hispanic communities living below poverty level. Data is the travel demand model extended from the New Jersey truck routes, which are expanded through particular counties across New York, New Jersey, Pennsylvania, and Connecticut, sourced from the New Jersey Transportation Planning Agency, demographic information from the US Census, and truck routes shape file from USDOT. In terms of the research methodology, I employ the Event Study model with spatially autocorrelation adjusted standard errors. Treatment groups are created based on the lower income minority groups of population percentage living within the 2km distance buffers from the truck routes, and event is 2010. Control groups are the rest of the populations living further away from the truck routes. As a result, I identify which specific neighborhoods would benefit from greater reductions in emissions, while quantifying overall expected social benefits, including savings from reduced health expenditures. I find that air quality implementing after the clean truck policy has in fact worsened for the treatment groups than the control groups, and these populations are indeed overburdened who are likely to be lower-income African Americans with higher asthma rates. These findings imply that the decade of mitigative policies have not been effective in reducing the environmental health burden. More effective and structural layers of pollution mitigation policy is needed, as an intermediary solution to lessen the environmental disparities in the midst of policy discussions to accelerate equitable electrification.

Citations


Key Words: environmental justice, local air quality, clean truck policy, event study

EVALUATING CLIMATE CHANGE ADAPTATION EFFORTS ON THE U.S. 50 STATES’ HAZARD MITIGATION PLANS

Abstract ID: 72
Individual Paper

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Climate change brings uncertain challenges for natural ecosystem, built environment, and human health, and thus may cause significant human and economic losses. Climate change is likely to increase the frequency and magnitude of some natural hazards such as heat and drought events. The U.S. Federal Emergency Management Agency (FEMA 2011) has issued a policy directive to integrate climate change adaptation initiatives into hazard-related programs, policies, and plans. However, to date there has been no comprehensive empirical study to examine the extent to which climate change issues are integrated into State Hazard Mitigation Plans (SHMPs). In addressing the current research gap, three research questions are posited in this study: (1) How well do the 50 SHMPs reflect an understanding of climate-related hazards, analyze these hazards, and propose actions to address the potential risks of climate-related hazards? (2) What are the relative strengths and weaknesses of each state’s hazard mitigation plan? (3) How should the integration of climate change with hazard mitigation plans be facilitated? This study develops 18 indicators to examine the extent of climate change considerations in the 50 SHMPs. The results demonstrate that these SHMPs treat climate change issues in an uneven fashion, with large variations among the 50 states. The overall plan quality for climate change considerations was sustained at an intermediate level with regard to climate change-related awareness, analysis, and actions. The findings confirm that climate change concepts and historical extreme events have been well recognized by the majority of SHMPs. The adaptation strategies that can help reduce climate change risks have been adopted in these plans. However, the plans still lack a detailed assessment of climate change and more incentives for collaboration strategies beyond working with emergency management agencies.

Citations


Key Words: Climate change, Hazard mitigation planning, Climate mitigation, Climate adaptation, U.S. 50 states

EXPLORING EQUITY IN CITY PLANNING FOR CHILDREN’S NATURE PLAY SPACES

Abstract ID: 77
Individual Paper

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Nature provides cultural ecosystem services (CES), which influence children’s physical, emotional, and cognitive development. Public outdoor spaces that promote nature play can be particularly beneficial for children’s well-being, yet there are often inequities in children’s access to and experiences in these spaces. Further, the ways in which equity is conceptualized may influence how these spaces are planned and implemented. To further explore how equity is conceptualized in the planning for nature play spaces, this study provides a cross-case summative analysis of planning processes from five large U.S. cities, participating in the Cities Connecting Children to Nature (CCCN) initiative. Document analysis and semi-structured interviews with program staff were employed, and common themes identified. Findings from this study provide insight into the ways cities frame equity in the planning of public nature play spaces. These findings contribute to the formation of future questions and in-depth case studies that continue to explore planning processes related to nature access and its influence on children's

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well-being.

Citations


Key Words: Nature Play, Equity, Children

THE IMPACT OF EXTREME HEAT ON DESTINATION VISITATION PATTERNS IN EL PASO, TX: A SPATIOTEMPORAL EXPLORATION USING THE SMARTPHONE MOBILITY DATA

Abstract ID: 86

Individual Paper

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Background: In the past century, the global temperature has been rising steadily and is projected to continue increasing at an accelerated rate leading to various heat-related health problems (WHO, 2018). While prior research has examined the effects of heat exposure on different outdoor activities such as labor, play, and sports (Moehrle, 2008; Spector et al., 2019; Vanos et al., 2017), little is known about its impact on mobility or transportation behaviors. The impact of heat exposure is more severe in vulnerable communities/populations, including low-income neighborhoods, people of color, older adults, those with limited access to air conditioning and green spaces, and urban residents living under high heat island effects.

Objectives: City of El Paso, Texas, is selected for this study given its climatic and population characteristics featuring scorching summers, high poverty rate, and predominantly Hispanic population (U.S. Census Bureau, 2021). The study analyzes the impact of high temperature on spatiotemporal visitation patterns of residents in El Paso, TX using the mobile phone mobility data called SafeGraph. It aims to (1) compare the visitation patterns during hot versus mild weather conditions, (2) study the effect of extreme heat events on outdoor activities, and (3) analyze distances from home to various destinations (i.e., Points of Interests, POIs) during hot versus mild weather.

Methods: First, the changes in weekly visits, visitors under different seasons, and climate conditions (i.e., extreme heat events) will be collected by using the SafeGraph POI data from 2018 and 2019 to exclude the impacts of COVID-19. Second, we extracted outdoor recreational places as the initial target destinations (e.g., city parks) for this study to examine changes in visitation patterns across different heat conditions. Third, microclimate conditions of the most and least used outdoor recreational places during extreme heat events will be measured and analyzed using the comfort formula (COMFA) human energy budget model. Lastly, geographically weighted regression (GWR) will be used to identify factors predicting the outcome (i.e., the average number of weekly visits to outdoor recreational spaces). Control variables include meteorological data for estimating thermal comfort level, built environment data (e.g., park size/amenities, vegetation index), American community survey (ACS) commuting data, and census-driven socioeconomic variables.
Preliminary Results: From the descriptive analysis, we found significant seasonal changes in visitation patterns. The average number of visitors to parks and outdoor recreational destinations during the summer time was higher than the ones for the fall/spring and winter seasons. The average Euclidean distances from visitors’ homes (census block group where their home is located) to these destinations during the summer time were also higher than in other seasons. We further found that the average of visitors to parks and outdoor recreational places was the highest under extreme weather conditions when the National Weather Service Heat Index (HI) indicates “Extreme Danger,” compared to “Mild,” “Caution,” and “Extreme Caution.”

Next Steps and Potential Implications: We will continue analyzing if certain characteristics (e.g., facilities, amenities, greeneries) of these places impact the visitation patterns during extreme heat. Especially the microclimate conditions of the most and least-visited parks under extreme heat will be measured using the COMFA model in order to compare the impact of thermal comfort on visitation patterns to parks of different characteristics. Furthermore, the socioeconomic characteristics of visitors and their relationship with the visitation patterns will also be explored. We anticipate that this work can offer insights into the impact of heat exposure on outdoor recreational activity and can guide the development of policies and interventions to mitigate the adverse effects of heat exposure, especially in vulnerable communities.

Citations


Key Words: Outdoor thermal comfort, Active transportation, Urban microclimate, Climate, Heat

WHAT FACTORS CONTRIBUTE TO GREEN SCHOOL LOCATIONS? AN ANALYSIS OF LEED CERTIFIED SCHOOLS IN HOUSTON, TX
Abstract ID: 97
Individual Paper

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Energy and water conservation improvements are known to bring a wide range of benefits to communities, but environmental justice research has also shown their problematic outcomes. This “greening” of neighborhoods often forms part of urban development initiatives that gentrify neighborhoods and displace local residents. Sustainable development is at odds with social equity when the greening of neighborhoods fails to include affordable housing and neighborhood stabilization mechanisms.
Federal officials are seeking to scale and expand environmental improvements in more equitable ways through massive investments in infrastructure, including school buildings. Green schools impact local communities by improving student achievement, community health, and reducing environmental inequities. There is thus precedent on green school siting, but the distribution of these buildings requires attention, given existing patterns of inequality associated to green urban development. Zhao et al.’s (2019) study makes a key contribution to this topic by finding a “reverse injustice” story. Their national-level analysis of the distribution of Leadership in Energy and Environmental Design (LEED) school buildings found that new green public schools are more likely to be sited in Black and Latinx communities.

There are few local cases that examine the impact of sociodemographic factors on the location of green schools—or public education facilities that are LEED certified in energy and water conservation standards. This paper builds on Zhao et al.’s (2019) study by addressing several empirical gaps, including a local scale and attendance area variables related to sociodemographic characteristics and the built environment. This study examines the public school district in Houston, Texas because it has heavily invested in building green schools. Using spatial and statistical analyses of public school attendance areas, the findings show that areas with older structures, higher income, younger populations, and fewer Asian residents are associated with LEED schools and higher LEED points. We find that LEED schools are not being distributed in ways that respond to existing inequities. Findings point to the continued importance of instituting processes and policies that ensure equitable distribution of green schools to advance environmental justice.

Citations


Key Words: environmental justice, environmental health, green building, schools, LEED

WHAT FACTORS INFLUENCES CITIES TO BE AN INNOVATOR IN CLIMATE ADAPTATION?

Abstract ID: 129
Individual Paper

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This paper examines the factors influencing cities to initiate and implement climate adaptation planning. Despite the imminent threat of climate change, few U.S. cities are adapting to it. A 2011 survey of 230 U.S. cities engaged in sustainable development found that 55% reported initiating climate adaptation. In 2021, the observations were cross-checked to track whether they had advanced in their adaptation efforts and recognized four distinct scenarios:

Scenario 1: Innovators. Cities that declared engaged in climate adaptation in 2011 and by 2021 had a plan addressing it.
Scenario 2: Followers. Cities not previously engaged in climate adaptation in 2011, but by 2021 had a plan addressing it.
Scenario 3: Failed implementation. Cities declared engaged in climate adaptation in 2011 but, by 2021, did not have a plan addressing it.
Scenario 4: Laggards. Cities not previously engaged in climate adaptation in 2011 and by 2021 did not have a plan addressing it. The study answers the following research questions. What influences some cities to implement adaptation earlier than others? What influences some cities to successfully implement the adaptation while others fail in the process? What influences some cities to engage in adaptation while others do not?

The research uses the 2011 survey of cities developed by Dr. JoAnn Carmin at MIT (Massachusetts Institute of Technology) in partnership with ICLEI (Local Governments for Sustainability), augmented with new complementary secondary data from sources such as Yale Climate Opinion, FEMA, Georgetown Climate Center, and the Census. Carmin’s research group identified the general stage of adaptation efforts in cities worldwide and the factors that hindered them from engaging in climate adaptation. However, it focused on initiating adaptation. No study has assessed how cities move from initiating climate adaptation to addressing it in a plan. Therefore, the current knowledge of what influences a city, from discussing adaptation to formulating a plan, is uneven and incomplete. Further, more than removing obstacles is needed to ensure adaptation success.

Climate adaptation is a prime example of urban innovation, defined as new ideas designed and implemented. Cities identified climate change as a problem and are trying to address the issue spontaneously. There is no requirement from the state or Federal government to coerce cities to adapt; they did it independently. Therefore, the central goal of this study is to explore the factors influencing climate adaptation through the lenses of innovation theory.

All research questions use the drivers of innovation identified in theory (need, motivation, learning networks, and resources) for the independent variables and binary logistic regression. Results suggest that communities with a strong perception of need from public officials and citizens are more likely to become innovators. Motivation variables are important to initiate the process, but more than motivation is necessary to advance. Further, how cities learn can differentiate if they are more likely to be innovators or fail in implementation. The study contributes to climate adaptation with suggestions on how cities can initiate and advance in the field, not as reproducing frameworks but by creating conditions that prompt such policy.

Citations


Key Words: climate adaptation, urban innovation, climate plans, implementation

DOES SELF-CONTAINMENT OF URBAN SCALE AND URBAN FUNCTION PROMOTE SUSTAINABLE DEVELOPMENT IN THE NEW TOWN? LESSONS FROM THE URBAN HEAT ISLAND DYNAMICS IN SHANGHAI

Abstract ID: 165

Individual Paper

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The blueprint for the Garden City prompted the municipality to embark on an ambitious New Town (NT) movement aiming to address the growing pressures of the population and environment in the inner city. The primary option for self-sufficient development in NT is to achieve a job-housing balance through increased urban scale. Indeed, industrial structure, residents’ occupation, and complementary functions have been proven to influence the development of NT, and its residents’ housing plan is not simply built on the co-location hypothesis. Due to the heavy ecological footprint caused by the NT construction and the record of climate extremes, proposing climate adaptation strategies is considered as the foremost challenge for sustainable development (SD) in the coming decades. In response, this study hypothesized that as the new towns scale growth and functional completeness is contributing to the SD of the Shanghai Five New Towns from 2005 to 2020. The most closely related to urbanization in climate change, UHI, was used as an indicator of SD, a negative environmental effect due to rapid urbanization shaping higher temperatures. The twelve driving factors were used to describe urban scale and function. Hotspot analysis was used to characterize the UHI spatially, Shannon index and Kernel density analysis were used to quantify the indicators, and Geodetector was used to explore the influence of the factors on the UHI. Findings show that during the daytime, the UHI intensity (UHII) of NT decreased by 0.777, however, the UHI footprint increased by 88%; at night, UHI intensity and footprint increased by 0.800 and 8%, respectively. Both the economic and population size growth of NT reduced its influence on UHI. Moreover, when the urban size reached about 2,000 people per square kilometer, its continued growth in population density would hardly increase the UHII. At daytime, when functional diversity was greater than 2.52, its continued growth reduced the influence on UHI; at night, when functional diversity was greater than 3, the thermal influence of SHID tended to increase. The compact use of industry, vertical and horizontal function mixed-use also facilitates SD. Blue-green space in the NT, the central area and the whole region in order to reduce the thermal influence and should link country parks and strengthen the urban-rural park system. This study enriches the connotation of self-containment for SD in Asian NT from the urban functional perspective, and provides practical experience for urban planners and policymakers to formulate SD strategies.

Citations


Key Words: New town, Sustainable planning, Self-containment, Function diversity, Urban heat island

EVALUATING SPATIAL EQUITY OF COOLING CENTER LOCATIONS FOR VULNERABLE POPULATIONS IN SEOUL, KOREA

Abstract ID: 181

Individual Paper
Over the past decade, the number of patients with heat-related illnesses has steeply increased from a total of 443 in 2011 to 1,537 in 2021 in South Korea (Korea Center for Disease Control and Prevention, 2021). South Korea’s main heat adaptation planning revolves around providing cooling shelters, mostly in the form of elderly centers, to those who cannot afford adequate cooling resources. While implementing such a policy is important, it is also important to evaluate the effectiveness of existing policies to derive useful planning policy implications for future heat adaptation planning.

Previous literature investigated barriers to accessing cooling centers and evaluated the equitable placement of cooling centers. Berisha et al. (2017) identified that cooling centers can be valuable resources to reach the region’s most vulnerable populations, but there needed improvements in increasing the use of cooling centers by the community. On a related matter, some studies analyzed how accessible cooling centers are by calculating the population within a certain walkable distance from cooling centers (Fraser et al., 2017; Voelkel et al., 2018; Kim et al., 2021) or by comparing the distance from cooling centers to public transit stations (Nayak et al., 2019). Other studies examined disparities in access to cooling centers among different population groups with varying levels of vulnerability to heat (Nayak et al., 2019; Kim et al., 2021; Adams et al., 2023). In Korea, only a handful of researchers analyzed the spatial distribution of cooling centers focusing mostly on spatial equity for the elderly population (Ahn et al., 2018; Kim et al., 2023). Despite the much broader definition of vulnerable populations, it appears that the existing research has primarily focused on the elderly population.

In this study, vulnerable populations were first defined under the IPCC vulnerability framework of exposure, sensitivity, and adaptive capacity (IPCC, 2001) for Seoul, South Korea on the dong district level. The key focus was on vulnerable areas that were more exposed to heat or had a high percentage of the elderly, youth, disabled, or low-income populations. We first calculated the spatial density of cooling centers for each district and then used Generalized Least Squares (GLS) regression methods to identify its association with predefined vulnerability variables. We also calculated the average distance from each cooling center to the nearest bus and subway stations to take the public transit accessibility factor into account.

The analysis results showed that cooling centers were located in areas with much denser youth, elderly, and disabled populations. The density of cooling centers was also significantly associated with high population density and impervious surfaces, both of which are well-known factors of urban heat island effects. Our results suggest that Seoul’s cooling centers are adequately distributed in a manner that improves the adaptive capacity of many vulnerable populations. We did not observe any association between the cooling center density and the high-income or low-income group. The distance from cooling centers to public transit stations was shorter in areas with a high percentage of low-income households. Thus, our research shows that the cooling centers in Seoul are overall well-distributed to enhance the adaptive capacity of vulnerable populations.

Citations


VARYING GENTRIFICATION OUTCOMES OF URBAN GREENING IN CHINESE CITIES: A LONGITUDINAL STUDY FROM 2012 TO 2020

Abstract ID: 185
Individual Paper

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Green gentrification, the process by which original residents are displaced by wealthier individuals due to the creation of new green spaces, has been criticized for exacerbating environmental injustice. While previous studies have explored this issue in individual cities, few have examined heterogeneities across multiple cities, especially in developing countries where cities are at different stages of expansion. This study investigates the relationship between green space and gentrification in Chinese cities from 2012 to 2020. Using Normalized Difference of Vegetation Index (NDVI), distance to adjacent parks, and area of adjacent parks as indicators of green space, and nighttime lights and land prices as proxies for gentrification, we find that both increasing NDVI and building parks nearby can lead to gentrification, but park area has a negligible effect. Stratified analyses further indicate that cities with higher levels of economic development and urbanization rate are more impacted by NDVI, but less affected by park distance. Our findings provide insights for urban planners and decision-makers, enabling them to develop localized strategies that mitigate the varying outcomes of gentrification in different stages of urban development. Such strategies can help promote equitable distribution of green spaces and alleviate environmental injustice especially in rapidly urbanizing regions.

Citations


Key Words: Urban green space, Green gentrification, Panel data, Land price, Stratified Analysis

A CRITICAL EXAMINATION OF THE ROLE OF MUNICIPAL PLANNING POLICY FOR FOSTERING THE DEVELOPMENT OF GREEN BUILDING: THE CASE OF THE TORONTO GREEN STANDARD

Abstract ID: 224
Individual Paper
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While the state of our natural environment has been a concern for over a century, growing signs of the disastrous impact of human activity on climate, natural resources, biodiversity, and other ecological systems have intensified public-sector efforts to promote more sustainable development. Globally, the United Nations 2030 Agenda for Sustainable Development adopted by world leaders in 2015, set goals and targets to protect the planet from degradation, so that it can support the needs of the present and future generations. A UN Goal of particular interest to urban planners and policymakers is Goal 11, which calls for making cities and human settlements inclusive, safe, resilient and sustainable (United Nations 2015, 2021). While most of my past research has focused on where human settlements are built (i.e., brownfields), I have been increasingly interested in exploring what is being built and how we can get developers to build more sustainably. Indeed, buildings and the building construction sector is responsible for over one-third of total global final energy consumption and energy-related CO2 emissions, in addition to their extensive use of land and natural resources and production of waste (UN Environment Program, 2021, p 29). Moreover, the demand for buildings continues to grow worldwide, with the floor area of the global building sector projected to double by 2060.

One vital tool that has emerged internationally to enable investments in developing sustainable and more efficient green buildings has been mandatory and voluntary green building (GB) and building energy performance measures, codes, and rating systems. Toronto was an early adopter, launching the Toronto Green Standard (TGS) in 2009. The TGS is a two-tier set of environmental performance measures comprised of five performance measure categories: (1) Air Quality; (2) Building Energy, Emissions and Resilience; (3) Water Quality and Efficiency; (4) Ecology and Biodiversity; and (5) Waste and The Circular Economy. Tier 1 of the TGS is mandatory for all new development applications in Toronto, while Tier 2 is a higher voluntary performance level incentivized through refunding fees charged to development. A more stringent TGS Version 2 came into effect in 2014, Version 3 in May 2018, and Version 4 in May 2022.

This individual paper is based on research that:

- Examines the history and evolution of the TGS to understand better its alignment with public GB policy and municipal building code policy and research;
- Tracks the scale, character, and location of building development incorporating the TGS from early in the program’s inception and investigates the green performance measures being adopted and rejected; and
- Lays the foundation for future research on the TGS, specifically, and public GB policy, codes, and programs generally, with particular attention to the experience of private developers and consumers, as well as policy, funding, and other measures to enhance their engagement.

Information for this project was gathered via the review of government documents, a half-dozen interviews with policymakers, staff, and others involved in developing and implementing the TGS, and the compilation and analysis of data on building projects involving the TGS submitted as part of the development Site Plan Application for planning approval from 2013 to 2022. As of the writing of this abstract, my research assistants and I are in the final stages of completing the dataset with information from over 1000 development projects that have incorporated the TGS. The results of this study will be written up in a paper for the ACSP. They will provide important information to scholars, policymakers, developers, and other stakeholders about the scale, character, and location of buildings incorporating the TGS and the green features being adopted and rejected by developers.

Citations

EXPLORING DIRECT GREENHOUSE GAS EMISSIONS ACROSS RESIDENTIAL NEIGHBOURHOODS IN HIGH-LATITUDE CITIES: A CASE OF EDMONTON IN CANADA

Abstract ID: 253
Individual Paper

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Cities are leading sources of GHG emissions since 50 - 60 % of global GHG emissions originate from cities linked to energy use (UN-Habitat, 2023). In the cities, urban households contribute to a large proportion of the emissions (Long et al., 2021). Therefore, studying GHG emissions resulting from household energy consumption is essential to reduce the carbon footprint of cities. This is particularly important in high-latitude cities, where per capita energy use is higher compared to mid and low-latitude cities. High-latitude cities face extreme weather conditions requiring heating in winter and cooling in summer, and largely rely on fossil fuel-based electricity generation (Fercovic & Gulati, 2016; Welegedara et al., 2021).

In our study, we explored the direct household GHG emissions across the neighbourhoods in a high-latitude city. We sought to answer three major questions: 1) What is the primary source of direct greenhouse gas emissions in high-latitude cities? 2) How do different socio-economic characteristics affect GHG emissions in these cities? and 3) How residents’ behavioural change can help to reduce household GHG emissions. We analyzed data from 265 residential neighbourhoods in the city of Edmonton, which sits at the 53rd parallel, by categorizing them as mature and newly developed based on their age. Mature neighbourhoods (n = 196) were developed prior to 2000 and located around the city’s core. On the other hand, newly developed neighbourhoods (n = 69) have been developed in the last two decades and are located at the city’s fringe. We used dwelling energy consumption data (n=17, 400) and dwelling area data (n = 334,905) provided by the Natural Resource Canada, a federal agency and the city of Edmonton to calculate GHG emissions from dwellings. This data was complemented by vehicle kilometer travelled data aggregated at the neighbourhood level collected by the city of Edmonton.

We found significant variations in per capita direct GHG emissions across neighbourhoods in the city, particularly within mature neighbourhoods. The average annual per capita GHG emissions from dwellings were 45 % higher than those from personal transportation in the neighbourhoods we studied. This highlights the need for greater emphasis on reducing GHG emissions from building in high-latitude cities. Interestingly, our analysis showed that even though new building standards and techniques have reduced energy use intensities in newly built houses in new neighbourhoods, the increased size of these dwelling units has not resulted in the corresponding reduction in per capita emissions.

Our results also indicate that per capita GHG emissions are highly correlated with neighbourhood median income level, percentage of renters, and residents’ affordability. Direct per capita emissions from dwellings and personal transportation increase with increasing neighbourhood income levels in both the mature (r = 0.8) and newly developed neighbourhoods (r = 0.4). This is mainly linked to the residents in affluent neighbourhoods having larger houses and using more personal vehicles for transportation. Per capita GHG emissions decrease with an increased percentage of renters in the neighbourhood, particularly in the mature neighbourhoods (r = -0.5),
potentially due to renters’ proximity to workplaces and public transportation and their tendency to live in small dwellings to reduce expenses. A significant negative relationship ($r = -0.3$) showed between the percentage of rental-burdened households (households that spend 30% or more of their income on housing) and direct GHG emissions. These findings can facilitate the implementation of mitigation measures and appropriate policy development focused on areas where they will have the most impact in reducing carbon footprint.

Citations


Key Words: Greenhouse Gas Emissions, Energy, Neighborhoods, Household

THE IMPACT OF COMPACT CITY ON CARBON EMISSIONS: FOCUSING ON SOUTH KOREA

Abstract ID: 254
Individual Paper

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As the recent climate problem continues, the realization of global carbon neutrality is required to reduce greenhouse gas emissions, which are the cause of the abnormal climate. Decarbonizing cities to reach carbon neutrality is a major agenda for many cities undergoing rapid expansion and development. As cities expand from the micro-scale (buildings and streets) to the meso-scale (urban and surroundings) to the macro-scale (regional and global), they have a significant impact on climate issues as well as on carbon emissions. Therefore, in order to carry out efficient spatial planning for the realization of carbon neutrality, it is essential to analyze the relationship between urban form and carbon emissions. In today’s urban planning, two types of cities are compatible: a compact city and urban sprawl. In this study, we explore the impact of compact city on changes in carbon emissions and reveal that compact city is a vision for a carbon-neutral city. This study utilized night satellite imagery (NPP-VIIRS) for high-resolution carbon emission mapping. Currently, several difficulties exist in conducting city-level analyses. The current estimation method uses the global average IPCC emission factor, which may not lead to the establishment of a carbon-neutral policy that reflects regional characteristics. Second, it is difficult to analyze carbon emissions at the city level, as only the emissions data for the metropolitan area are currently being announced. Lastly, it is difficult to confirm the temporal and spatial distribution with existing data. Therefore, a detailed unit analysis that overcomes the limitations of the existing estimation method is required, and the estimation method using night satellite images enables detailed analysis in pixel units. Next, various detailed indicators that can explain compact city were selected, and their relationship with carbon emissions was reviewed. In particular, among several variables, the LCZ (Local Climate Zone) can morphologically explain the compact city. Since it includes information such as height and density, more detailed analysis than with the LULC (LandUse/LandCover) data is possible, while information on land cover/land use can be represented by the LULC data. In addition, the compact city can be functionally described through the Starbucks index and the PizzaSchool index. These are one of the largest franchises in South Korea, because the criteria for tenancy include population, income level, station area, etc. In addition, after measuring the connectivity, dispersibility, and clustering of the city, the relationship with carbon emissions is analyzed. As a result of the study, a compact city is
more effective in realizing a carbon-neutral city, so landuse planning that considers this is necessary. These results are judged to be sufficient to support the validity of the compact city discussed today for sustainable city.

Citations


Key Words: Carbon Neutral City, Compact city, Landuse planning, Sustainability

IMPROVING DECISION SUPPORT SYSTEMS FOR COASTAL COMMUNITIES WITH REPETITIVE FLOOD LOSSES

Abstract ID: 277
Individual Paper

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How can the tradeoffs of coastal adaptation strategies be better characterized to promote equitable outcomes? Coastal communities face unique challenges to manage the impacts from climate change, like sea level rise (SLR) and storm surge. These hazards represent adaptation challenges, especially given deep uncertainty about the rate of change. Given limited resources and the great number of people and assets at risk in the coastal zone, investing in adaptation strategies will involve tradeoffs. Communities need decision support systems that facilitate the discussion about the tradeoffs adaptation pathways. We use mixed methods and a case study approach to support tradeoff analysis and decision-making in the barrier island community of Ortley Beach, New Jersey, which has suffered severe repetitive losses.

There are multiple ways to adapt to coastal flood risk, which may broadly be characterized as protection (e.g., sea walls), accommodation (e.g., elevating homes), and retreat (e.g., planned or unplanned relocation) (Oppenheimer et al., 2019). The choice of which strategy to implement is context specific, value-laden, and involves multiple stakeholders. Preferences toward adaptation strategies vary across groups. Following prior research (Bessette et al., 2017), we conduct 25 interviews with households, local officials, and state and federal decision-makers to explore how values relate to preferences for adaptation strategies in Ortley Beach. We use the outcomes from the interviews to identify key values that serve as the foundation for our subsequent multi-objective tradeoff analysis. Key values that emerge include economy, social equity, and effectiveness. Economy refers to the impacts of adaptation strategies on personal finances, municipal finances, and broader economic implications. Social equity refers to procedural, distributional, and intergenerational impacts adaptation project implementation. Effectiveness refers to how well a strategy will protect people or assets from future flood hazards.

The emergence of conflicting values across groups challenges norms for evaluating adaptation strategies. Currently, agencies like FEMA rely heavily on cost-benefit analysis (CBA) to support decisions about what types of strategies to implement. A large literature exists critiquing how CBA is currently conceptualized and implemented by agencies like FEMA (Shreve & Kelman, 2014). In response, alternative decision support frameworks have emerged, such as Scenario Analysis, Multi-Objective Optimization, Robust Decision-Making (RDM), and Dynamic Adaptive Policy Pathways (DAPP) (Haasnoot et al., 2013).
We design a tradeoff analysis of coastal adaptation pathways for Ortley Beach that integrates elements of RDM and DAPP, while grounding the analysis in values elicited during stakeholder engagement. We constrain our discussion to an analysis of two common household level interventions for flood mitigation: property buyouts and elevations. Modifying from BenDor et al., 2020, we explore three policy pathways: 1) all elevations, 2) piecemeal buyouts and elevations, 3) all buyouts. Using both qualitative and quantitative techniques, we evaluate the pathways under three climate scenarios, and according to the salient values elicited from the interviews (economy, equity, effectiveness).

Our approach integrates diverse values, robustness to uncertainty, and dynamic adaptability into tradeoff analysis and decision support. Findings indicate that elevations may be effective in the short term but may result in strain on municipal finances as climate scenarios worsen. The piecemeal approach results in a death spiral for municipal finances. ‘All buyouts’ is the most effective approach to flood risk but erodes the tax base. Social equity impacts are contingent on how programs are implemented.

Overall, our approach highlights limitations of CBA as currently designed, and contributes to conversations about alternative decision support frameworks for evaluating public investments in adaptation policies. Our methods enable context-specific, value-based evaluation of adaptation pathways in a coastal area struggling with repetitive flood losses. The approach and findings are relevant for communities, practitioners, and scholars involved in coastal adaptation planning.

Citations


Key Words: Coastal climate adaptation, tradeoff analysis, land use, decision support, values

WHERE IS THE MODEL PERFORMING BADLY? EXPLORE THE PERFORMANCE OF MACHINE LEARNING APPROACHES IN PREDICTING PARTICULAR MATTER 2.5 CONCENTRATIONS IN LOS ANGELES COUNTY

Abstract ID: 295
Individual Paper

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Previous studies have proven that exposure to air pollution can have various short-term and long-term effects on individuals’ health, such as respiratory and cardiovascular problems; however, due to the limitations in data
collecting techniques, it was hard for previous studies to quantify the exposure. Among the air pollutants, particulate matter (PM) 2.5 and 10 have raised concerns among researchers and practitioners. Although there are demands of studying the factors on PM concentration, previous studies had to depend on the regional air pollution sensors, which may not precisely represent the actual PM exposure to the individuals.

Recently, low-cost air pollution sensors have become increasingly popular and have been used in research and practical projects due to their affordability and ease of use. To date, studies have utilized data from low-cost air sensors to explore the impact of the built environment and public transit on PM concentrations and predict the concentrations in places without sensors, while few explored the disparities in the model performance.

In response to the demand for street-level air pollution studies and research gaps, this study explores the impacts of the built environment and public transit services on average PM 2.5 concentrations through interpretable machine-learning approaches based on the data from Purple Air. There are two research questions: What are the roles of the built environment and public transit on PM 2.5 and 10 concentrations? Where does the best-fit model perform the worst? Choosing Los Angeles County as the study area, in the analysis, we first developed a data collection. The dependent variables are the average PM 2.5 concentration in the morning, afternoon, evening, and night. The independent variables are land use variables and transportation variables. The control variables include meteorology factors, such as temperature, wind speed, and wind direction. Based on the final data collection, we tested five machine-learning approaches and identified the best-fit model based on the root-mean-square deviation (RMSE). Then, we utilized an interpretable framework to visualize the model results. Last but not least, we calculated the gap between the actual value and the predicted value of each observation (i.e., sensors) and identified those where the gap is significant. Through exploring the sociodemographic and economic situations of the census block groups where the sensors with significant gaps are, we concluded the disparities in model performance.

In the results, first, the X-gradient boosting decision tree model performed best. Based on this model, we developed four sub-models to explore the impacts of land use and public transit services on PM2.5 concentrations at different times. In addition, we found that the temporal disparities in important predictors affecting PM2.5 concentration are significant. For instance, the findings indicate that the distance to the closest public transit stops, the traffic flow of the nearest street, and the distance to the closest commercial land use can significantly be correlated with high PM2.5 concentrations, and the impacts of traffic flow and public transit reach peak in the afternoon and evening. Third, we noted that most of the sensors with significant gaps gathered in the neighborhood with low-income (below the regional average) populations.

These findings could have three implications for the researchers and practitioners. First, the interpretable machine learning framework should be worth using in future studies due to its accuracy. Second, the temporal disparities are significant, so related improvements, such as increasing humidity near the transit stations during the peak hour, should be on the list of actions. Third, the performance in low-income neighborhoods could be tricky, and there should be more sensors equipped in these neighborhoods to collect extra data.

Citations


Key Words: low-cost sensors, particulate matter, air pollution, machine learning approaches, model performance

LOCAL AND INTERGOVERNMENTAL FISCAL IMPLICATIONS OF FLOOD RISK
Abstract ID: 297
Individual Paper

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Better risk management in coastal areas depends in part on re-aligning the incentives experienced by households and local jurisdictions by changing the rules of the intergovernmental public finance “game,” regarding the share of local government revenues from own sources versus monies from higher levels of government. This paper develops empirical evidence for re-assessing local public finance strategies in an era of increased climatic hazards due to coastal flooding, more intense rainfall, and similar events. It provides measures of local fiscal autonomy, fiscal capacity, and dependence on revenue sources that are vulnerable to flood hazards. It examines how such events influence both local expenditures and revenues. It investigates how the scale of the disaster, the lumpiness of public assets, and the stickiness of certain expenditure patterns affect local responsiveness to changing climatic risks.

The paper uses periodic data from the U.S. Census of Governments and the Annual Survey of State Government Expenditures to characterize national patterns of local public finance. These data show that states whose municipalities are highly reliant on local resources (because property taxes exceed 50% of local revenues) that are also vulnerable to climatic hazards include CT, ME, MA, NH, NJ, and RI. This justifies a deeper dive into the situation in one of these states: NJ. For this state, the paper uses municipal and school district budget time series data for NJ, coupled with data from the NJ Sandy Transparency Portal which documents intergovernmental resource flows associated with that 2012 hurricane.

Findings from this study include confirmation that property tax-reliant municipalities can suffer significant revenue losses following disasters, and that state and federal programs are essential for offsetting that revenue loss. Expenditures indeed seem sticky and do not shrink when population shrinks, at least in the short term. The role of lumpy assets is less clear. Scale of disaster relative to the size of the municipality is important in the sense that most residents move to neighboring municipalities during the recovery period, but the extreme variation in local physical vulnerability means that even widespread damage only affects a miniscule share of local land area. This finding is NJ-specific and may not apply in low-lying areas of other regions. There is an important equity dimension to this pattern, because often those who are forced out of their homes during disasters may also be the residents most dependent on public expenditures.

Implications for planning include the need to pay increased attention to the intergovernmental context of planning, both as part of a portfolio of risk management tools that are available to local jurisdictions and because local land use decisions affect the contingencies to be managed at the county, state, and federal levels. A second implication is that planners should consider using tools developed for other purposes, such as fiscal impact analysis, to anticipate the likely impacts of specific hazard scenarios on municipal finances. This can help for understanding both hazards and adaptive responses, such as buyouts of flood-prone properties. These implications suggest that planning can play an important role in enhancing municipal viability as the challenges of adapting to climate change increase.

Citations
THE INFLUENCE OF SOCIOECONOMIC CHARACTERISTICS AND URBAN FORM ON URBAN STREAM PHOSPHOROUS POLLUTION IN THE CONTINENTAL U.S.

Abstract ID: 307

Individual Paper

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Urban stream syndrome, which describes the constantly observed degradation of stream draining urban land, is complexly influenced by physiographic factors (e.g., soil, geology, streamflow) and human factors (e.g., various point and nonpoint source pollutions). It was documented that more than 30,000 (13%) of the streams in the United States were impaired with urban stream syndrome characterized by higher water temperature, increased sedimentation, enhanced level of nutrients, metals, bacteria, and so on. Existing urban planning and urban sociology theories supported that urban form and social factors are co-produced and determine the environmental processes such as air and soil pollution. Similarly, urban stream quality is also affected by both urban form and social factors—urban form influenced the connectivity of impervious areas, while social factors are associated with water quality related behavior and urban form. However, there is limited empirical research of how urban form and socioeconomic factors interact to affect urban stream water quality.

This study used total phosphorus (TP) as an indicator of urban stream water quality and aimed to answer three research questions. Firstly, we investigated the spatial and regional characteristics of 854 urban watersheds in nine regions of the continental United States, based on factors such as urban form (indicated by urban development intensity and configuration), socioeconomic factors, land use/land cover (LULC), and impervious percentage. Second, we explored whether there are any race and income inequality regarding exposure to TP contamination. Third, we investigated how the effect of socioeconomic factors on urban stream TP concentration changes according to different urban form factors.

We compiled a continental-scale dataset to document various urban form and socioeconomic drivers of urban stream water quality degradation by integrating remotely sensed data, census tract data, and other open-sources data with TP concentration data from U.S. Water Quality Portal. Then, we compared linear mixed model structures with different random effects and interaction effects and selected the best one with $R^2$ 0.66 to quantify the effects of urban form, socioeconomic factors, and TP concentration. Control variables included LULC, impervious percentage, climate, soil, fertilizer application, and so on. We found that high income communities experienced...
higher TP pollution, which might be caused by the lawn fertilizer used in single family houses, particularly in low density areas. Higher patch density of urban areas also contribute to higher TP concentration, with this effect more pronounced in low income subwatersheds.

We expect the outcome of this research could help learn more about the underlying social mechanisms of urban stream water quality degradation and suggest urban planning and regional development policy to remedy the degradation. For example, Midwest, Mideast, and West Pacific regions were particularly affected by fertilizer application and exhibited obvious income and demographic inequalities in terms of TP exposure. We therefore recommend targeting agricultural conservation practice and nonpoint source pollution programs towards underrepresented urban subwatersheds in these regions. Future research should aim to find the causal mechanisms through which socioeconomic characteristics and urban form jointly affect urban stream water quality.

Citations


Key Words: urban form, water quality, LULC, environmental justice, urban stream syndrome

URBAN GREEN SPACES IN DEPRIVED AREAS: A MISMATCH IN THE SUPPLY AND DEMAND OF ECOSYSTEM SERVICES IN KUMASI, GHANA

Abstract ID: 315
Individual Paper

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Introduction: Urban green spaces (UGS) are rapidly depleting in many Global South cities (Cobbinah & Darkwah, 2016) causing a decrease in the ecosystem services (ES) they provide. Because the Global South (Wan & Su, 2017) has an increasing number of deprived urban areas as hubs of poverty (Roy et al., 2018), the decline of urban green spaces is particularly concerning due to the benefits they bring to people (Barbosa et al., 2007).

Deprived urban areas, especially in the Global South, usually have few available UGS and other worse environmental conditions compared to well-off areas. However, residents of deprived areas depend more on the ES provided by UGS than affluent areas, and they are negatively affected by a decrease in coverage, quality, and accessibility to such services (Derkzen et al., 2017). This, therefore, presents a mismatch between the supply of and demand for ES of UGS in deprived areas. Many studies have been done on UGS and ES in the Global North with comparatively fewer studies in the Global South. Little is known about the relationship between perceived available UGS and associated ES and what residents demand in deprived areas of Global South cities.
Research goals: We assess the level of (i) perceived supply of and (ii) perceived demand for ES of UGS in selected Global South deprived urban areas; and (iii) determine the potential gap(s) between the perceived supply and demand in the areas.

Methods: Focusing on two deprived neighborhoods of Kumasi, Ghana, we used a mixed-method approach to analyze the potential mismatch between the supply and demand of ES provided by UGS. To determine the supply – respondents were allowed to select all the ES they perceived to be available in their areas based on a list of potential ES provided by UGS in sub-Saharan Africa from the literature. Also, they had the option to describe services in their own words. Furthermore, they were asked to indicate the type of UGS that provide such ES as parks, street trees, garden, wetland, sports field or use their own words. To determine demand – the respondents demanding for more UGS were allowed to select the ES they need in their areas based on the initial list of ES. And to assess the potential gap(s) in the two selected areas, the supply and demand aspects of ES of UGS were matched.

Results: We found that due to land scarcity and encroachment, the supply of UGS in these deprived urban areas was limited, while relatively more UGS are found in surrounding affluent areas. Still, residents of the deprived areas enjoy the few available UGS and ES, indicating an adaptation to the situation. However, most of such residents see the need for additional UGS. Specifically, we found a higher demand for cultural ES of UGS than demand for regulating and provisioning ES, with recreational activities being the most emphasized. Interviews showed that bridging the gap between the high demand and low supply of UGS in deprived areas requires planners to collaborate with all stakeholders and secure legislative support.

Implications: Our results suggest that planners seeking to increase the provision of UGS and ES in Global South cities face significant challenges, including conciliating UGS with the competing priority of building sufficient housing. Due to the limited land space in Kumasi’s deprived areas, planners could implement creative solutions like multi-functional recreational facilities that also serve for stormwater management, adoption of green roofs, and creation of UGS in nearby areas within walking distance. These investment decisions could be informed by the goal of achieving 9 square meters of UGS per capita (based on WHO standards).

Citations


Key Words: Urban green spaces, Ecosystem services, Inequality, Global South, Informal settlements

LIVELIHOOD ACTIVITIES IN SUB-SAHARAN AFRICA: APPLYING ENTREPRENEURSHIP AND INNOVATION FOR CLIMATE CHANGE ADAPTATION

Abstract ID: 323
In Sub-Saharan Africa and other developing regions in the world, rural communities have relied on diverse activities in order to earn income for their households to survive. These activities which are mostly informal, have provided informal and usually seasonal employment and livelihood opportunities for rural communities to cope during times of hunger and deprivation. Livelihoods activities comprises of capabilities, assets and activities required for a means of living. Some of the common rural livelihood’s activities include but are not limited to, cropping and livestock rearing, gardening, street vending and home construction. Unfortunately, in recent times, climate change has emerged as a challenge for not only the socio-economic setting of the poor communities, but for the whole sphere of living, particularly in rural areas. Climate change is comprised of long-term shifts in temperatures and weather patterns leading to unprecedented high levels of temperature, extreme episodes of flooding, heat waves, and drought just to mention but few. Consequently, the complex nature within which the rural income earning activities and livelihoods are found, and how such activities are dependent on the environmental characteristics and the climatic conditions of a given area, makes it more difficult to pursue. The purpose of this paper is to discuss the role of entrepreneurship and innovation in climate change adaptation and its implications for rural development planning. This theoretical paper discusses how livelihoods activities can form a base for innovation and entrepreneurship development in rural areas. Case studies from few sub-Saharan countries are used to demonstrate the application of this. The paper argues that rural livelihoods activities in Sub-Saharan Africa can be developed through innovation towards entrepreneurial success. Entrepreneurship as a strategy for rural development planning and climate change adaptation can intensify potential of absorbing a growing rural labor force, slowing rural-urban migration; contribute to national income growth, and promoting a more equitable distribution of income. The paper concludes that for rural livelihoods to become economically viable, innovation need to be applied which can be built towards entrepreneurship development and contributes to climate change adaptation and rural development planning. Furthermore, the paper recommends planning and policy directives towards rural development planning in sub-Saharan.

Citations


Key Words: Livelihoods, Climate Change Adaptation, Innovation, Entrepreneurship, Rural Development Planning

SPRAWL OR DESIGN? SITE PLANNING AND SUSTAINABILITY IN THE US

Abstract ID: 334

Individual Paper

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US cities have been growing at their edges for a century and a half, jeopardizing environmental and social sustainability. Yet, there is a limited understanding of how the specific neighborhood design used to develop suburbs contributed to their poor social and environmental standing. In this paper, I introduce a measure of garden city design (GCD) for all US neighborhoods. This measure captures a set of common morphological features used to develop US suburbs inspired by the garden city model—a prominent site planning paradigm dating back to the 1900s. This measure is inferred from the layout of street networks and blocks and quantifies for the first time the use of GCD over time and space. To isolate the causal effect of GCD, I exploit its successive national implementation and show that its impact is 30% as important as that of sprawl in determining greenhouse gas emissions, social isolation, and sedentarism. Instrumental-variable estimates imply that shifting from a neighborhood in the bottom 80% of the GCD distribution to one at the top 20% increases yearly greenhouse gas emissions by 0.54 metric tons per person, physical isolation three-fold, and sedentarism by 86 minutes of stay-at-home time per day. These results suggest that neighborhood design can be used to mitigate some of the adverse social and environmental consequences of suburbanization.

Citations


Key Words: suburbanization, environment, sustainability

COSTS AND TRADEOFFS OF MANAGED AND UNMANAGED RETREAT IN RESPONSE TO SEA LEVEL RISE

Abstract ID: 354

Individual Paper

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Sea level rise (SLR) is projected to impact approximately one billion people and US$8-14 trillion ($2011) worth of assets worldwide by 2100 (Pörtner et al., 2022). The Intergovernmental Panel on Climate Change identifies options to respond to SLR and categorizes them as: no response, advance, protection, retreat, accommodation, and ecosystem-based adaptation (Oppenheimer, 2019). For many coastal areas, retreat is the most viable long-term option due to an inability to reduce risk (exposure) (Haasnoot et al., 2021). To contribute to the field’s understanding of retreat, our research analyzes the financial and non-financial costs of retreat at Paumalū, O‘ahu, a world famous beach in Hawai‘i that is experiencing severe erosion. We assess three retreat approaches, leveraging detailed SLR modeling projected to the year 2100, to estimate the public and private costs of retreat and the amount of increased beach area. Expanding upon approaches introduced by Griggs and Reguero (2021), we characterize the three approaches as reactive, threshold-based, and all-at-once. The costs we quantify are property acquisition (for example, through voluntary buyouts or eminent domain); structure removal and remediation (both private structures and public infrastructure including roads and potable water piping); loss of
property tax revenues; and private property loss. Beach area added due to retreat (by type) is also measured as an indicator for environmental preservation. Other important considerations of retreat include relative risk to public safety and environmental contamination of the nearshore, for example due to asbestos and lead introduction from homes collapsing into the shoreline. We find that an all-at-once approach results in a substantially larger cost than the other two scenarios, with all costs born to the public; however, it also maintains a larger beach area for a longer period of time. In contrast, a reactive approach has the lowest direct costs overall, though the highest for homeowners. It also offers the lowest beach area gained over time and has the most likelihood for public safety risk and nearshore environmental contamination. The threshold-based approach largely mitigates public safety and environmental risks, and provides considerably more beach area over time than the reactive approach, with similar overall costs. There are, however, more costs borne by the public than private actors (relative to reactive). Given the marked improvement over the status quo, the threshold-based approach should be further explored as a SLR response for coastal communities aiming to maintain their sandy beach areas. Overall, our study not only informs coastal adaptation research but also offers a new way of framing financial costs alongside social and ecological values, which are also important to prioritize in coastal planning decisions (Bremer et al., 2022).

Citations


Key Words: Managed retreat, Sea level rise, Coastal resource management, Hazard modeling, Cost minimization

ENVIRONMENTAL PLANNING, COMMUNITY STEWARDSHIP, AND WATER: A COMPARATIVE ASSESSMENT OF GREEN INFRASTRUCTURE IN TEXAS CITIES

Abstract ID: 429
Individual Paper

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Riparian lands, the interface between terrestrial and water ecologies, play a critical role in keeping ecosystems healthy and serving as buffers between land and water. However, rapidly sprawling metropolitan regions in Texas continue to urbanize environmentally vulnerable riparian areas. As urban areas grow, access to urban green spaces is shrinking, and their programming, ownership, access, and uses are highly contested, especially around water

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bodies. Over the past two decades, there has been a growing trend of using greenbelt plans for trails, parks, preserves, and wetlands around waterbodies to increase accessibility to green spaces, reduce the growth of impervious surfaces, and restore urban streams. Although these plans mitigate some environmental impacts, they fail to address equity and justice for low-income minority populations, as economic growth and environmental goals set by dominant voices are their driving factors. This study examines the distribution of environmentally suitable and harmful land uses around waterbodies, the ways in which greenbelt plans address (or not) the inequity of land use distribution, and the implications of the procedures in those plans on the long-term well-being of riparian areas to support collective action.

This paper contributes to environmental planning by examining the inequities low-income communities of color face in engaging with greenbelt plans. To reveal these inequities, I first explain how greenbelt plans are broadening in scope, from providing physical access to interconnected greenspaces to serving as public spaces connecting people to their culturally and historically significant uses and motivations. In many cities, residents and neighborhood groups living around those amenities manage, maintain, and govern greenways. Engaging with this broadened scope of greenbelts, I identify, describe, and categorize the relationship between environmental planning, environmental stewardship (ES), and equitable methods of preserving urban riparian lands. The overarching research question is as follows: what is the relationship between greenbelts, community stewardship, and equity in green infrastructure planning? To address this question, I utilize a mixed methods approach to analyze greenbelt plans from Houston and Dallas as illuminating case studies of rapidly urbanizing metropoles in the state of Texas, where some landowners have the capacity to practice strong property rights. But they are also places where large sections of low-income communities of color reside in environmentally vulnerable riparian areas with minimum land rights. I examine the relationship between equity and ES in the two contrasting metropoles that share a complex and significant water system of the Trinity River.

The study reveals that these greenbelt plans do not have the proper mechanism to enhance the ES of low-income communities of color as they continue to disregard issues of land use that are central to environmental well-being, while failing to strengthen the green initiatives that are culturally relevant to the community’s desires. Also, the plans inequitably address the relationship between private land ownership and stewardship resources, continue to provide unjust compensation to participants, and yield long-term economic benefits to external stakeholders. To address these inequities, I draw from commingling theory to demonstrate how planners can recognize and integrate the diversity of collective action that emerges from the community rather than adopting only those actions that support the interest of the dominant actors. For instance, diverse collective action for ES can range from an African American community in a Freedmen’s settlement coming together to protect cemeteries and their communities from multi-hazard threats to recognizing low-income individuals as partnering actors within the green plan. My findings suggest that to reduce the paternalistic role of government entities in low-income communities, the diversity of collective action should serve as a mechanism to make stewardship an equitable tool to execute green infrastructure and build a green and just city.

Citations

PLAN EVALUATION ON URBAN RESILIENCE OF SMART CITY PLANS IN KOREA

Abstract ID: 447
Individual Paper

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In 2016, the World Economic Forum launched a debate on the 4th Industrial Revolution, which led to the emergence of the 'Smart City' concept. Cities worldwide began to develop Smart City Plans to make their cities 'smart and intelligent' to support Sustainable Development Goals and become a substantive solution for urban issues. According to International Telecommunication Union, there are more than a hundred definitions of Smart City, but they generally agree on the objective of solving urban issues through Information and Communications Technologies (ICTs). In Korea, the Smart City Law defines Smart City as a sustainable city that provides various urban services based on urban infrastructure built from converged ICTs aimed at urban competitiveness and improvement of the quality of life.

However, Smart City has been criticized by various researchers for being technology-oriented and neglecting the demands of the cities, environmental sustainability, and disaster prevention. Among many countries proceeding with Smart City movements, Korea is the most renowned as the leading country in the field of Smart City, with many projects underway. However, there has been inadequate research on the necessities and evaluations of urban resilience and disaster prevention in Smart City Plans.

There are various types of Resilience related international and domestic standards. The International Organization for Standardization (ISO) developed several standards such as ISO 22319:2017 (Security and resilience – Community resilience – Guidelines for planning the involvement of spontaneous volunteers) and ISO 22320:2018 (Security and resilience – Emergency management - Guidelines for incident management). U.S Government Accountability Office (GAO) also developed GAO-20-100SP (Disaster Resilience Framework). This research will review the international and domestic standards, and develop the Urban Resilience Index for Smart City Plans of Korea.

This research evaluates the Urban Resilience of Smart City Plans in Korea, considering the criticism of Smart Cities being technology-oriented and neglecting the demands of the cities, environmental sustainability, and disaster prevention. The research reviews the international and domestic standards, indices, and key performance indicators for Urban Resilience, and develops an Urban Resilience Index for Smart City Plans based on the reviewed literature. It evaluates and analyzes the Urban Resilience of Smart City Plans of Korea using the developed index with the Plan Evaluation method of Brody (2003). Finally, it derives ranks, implications, and policy proposals for the Smart City Plans of Korea. The research aims to emphasize the Urban Resilience of Smart City and provide implications for the cities and government of Korea to develop more resilient Smart Cities that consider aspects other than advanced technologies to withstand natural disasters. The research will contribute to the literature on Smart City and Urban Resilience by offering a unique perspective and valuable insights.

Citations

Key Words: Urban Resilience, Sustainable Smart Cities, Plan Evaluation, Sustainability, Sustainable Development Goals

URBAN LAND EXPANSION, AIR POLLUTION EXPOSURE AND LUNG CANCER: A PATH ANALYSIS IN CHINA
Abstract ID: 459
Individual Paper

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Background: The world has experienced unprecedented urbanization, causing severe air pollution and a huge health burden. Numerous studies linking urban form and air quality show that compact urban development with simple shape can lower air pollution emissions. A few studies, on the other hand, argue that compact city may trap air pollutants and increase the number of residents exposed to poor air quality. These results are contrasting and could not inform a sustainable urban expansion that promotes public health. For the wellbeing of billions of urban residents, it is vital to investigate the relationship between urban land expansion, air pollution exposure and health outcomes, especially in the fast-expanding developing countries experiencing serious air pollution.

Methods: We addressed this issue using data from 181 cities in China. First, we derived urban built-up land data in 2010 from the Global Artificial Impervious Area (GAIA) dataset to portray urban land expansion from the aspect of urban size, urban form, and urban expansion dynamics. We also calculated air pollution exposure in 2010 using ambient particulate matter and population data from the Socioeconomic Data and Applications Center (SEDAC). Lung cancer incidence in 2015 (with a 5-year time lag from exposure) was derived from the National Cancer Registry Center of China (NCRC) to reflect the health outcome caused by air pollution. Then, we used path analysis to examine the relationship between urban land expansion, ambient air pollution exposure, and lung cancer, with economic activity and climate under control. Moreover, to derive the optimal city scale, we further adopted spline regression to test the potential nonlinear relationship between urban built-up land area, urban population density, and air pollution exposure.

Results: Major urban agglomerations such as Beijing-Tianjin-Hebei region, Yangtze River Delta, Pearl River Delta, and provincial capitals are areas with large urban built-up area, complex shape, scattered layout, fast expansion rate, and a high proportion of outlying urban land. In the path analysis, urban land expansion showed significant impact on lung cancer incidence by elevating air pollution exposure. Specifically, urban population density, patch density, annual growth rate, and the proximity of cultivated land and urban land were significantly and positively associated with ambient particulate matter exposure (with standardized coefficients of 0.252, 0.261, 0.270, and 0.463, respectively). This exposure ultimately contributed to the incidence of lung cancer (with standardized coefficients of 0.243 and 0.217 for males and females, respectively). In addition, results of spline regression
showed that urban built-up area was in an inverted U-shaped relationship with ambient particulate matter exposure, with an inflection point at 1000 km², indicating that urban land expansion could decrease air pollution exposure in areas with urban built-up land above 1000 km². An N-shaped relationship was also revealed between urban population density and ambient particulate matter exposure, with two turning points at around 5400 and 8300 residents per km². It suggests that increased urban population density—within a certain range—could reduce air pollution exposure, with the lowest point occurs at 8300 residents per km².

Implications: This study has implications for the urban planning in fast-expanding and densely populated developing countries to decrease air pollution exposure and promote public health. When determining city scale, it is suggested to restrict the speed of urban expansion. A per capita urban built-up land area of around 120 m² (equivalent to 8300 residents per km²) is recommended, approximately the urban population density of Wuhan. In terms of the spatial configuration, our results suggest that urban development should not be scattered. Proximity of cultivated land and urban land is not recommended as well, so as to reduce exposure to air pollution produced by agricultural activity.

Citations


Key Words: urban land expansion, ambient air pollution exposure, public health, China, sustainability

DATA FLOWS AND SEDIMENT: URBAN INSTITUTIONS OF FLOOD KNOWLEDGE IN DAR ES SALAAM

Abstract ID: 495
Individual Paper

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This paper presents an ethnography of land use planning institutions in with the goal of explaining the causes of persistent flooding. Prominent explanations of flooding, especially in global South cities, revolve around a series of lacks—a lack of infrastructure, a lack of capacity, a lack of planning, and a lack of knowledge. Global-national partnerships to address these issues have led to a rapid increase in the availability of digital data meant to inform planning decision making regarding environmental hazards like flooding. For example, a recent World Bank program has made Dar es Salaam, Tanzania, one of the most densely mapped locations in the world on OpenStreetMap. However, land use controls in the city are enacted through actors with varying levels of influence on outcomes, including government and civil society organizations, international agencies, regulations, and informal processes that undermine the ideal of state control. In this context, I ask what types of information are needed to address the root causes of flooding?

Despite the hierarchical, top-down institutional design of urban land management in Tanzania, a rich knowledge about the locations and causes of persistent flooding resides at the “bottom”, at the neighborhood level, within community members, representatives, and Ward or Subward government officials. While climate change has led
to increasingly intense periods of drought and rainfall, recent expert studies have shown what local communities
have been documenting and experiencing for two decades—the crucial role of sedimentation in disbursing small
streams into communities causing floods. Local knowledge contains information about urban scale hydrology,
problems with small scale drains, and institutional causes of flooding, but this information is excluded from the
arenas of decision making for a variety of reasons, including technical misalignments, cultures of governing, styles
of participation, and corruption.

To address persistent flooding in Dar es Salaam, I argue, requires dredging, both figuratively and literally, to
integrate local knowledges with governance processes in support of flood risk reduction and to maintain the
waterways by removing sedimentation. I argue for future research and practice to focus on three types of
information—the everyday practices of land use governance, the values and perceptions of at-risk residents and
communities, and avenues of advocacy for synthetic knowledge claims. More broadly, I argue that ethnographies
of the local state can reveal crucial points of intersection between the state and society that can give rise to new
modes of knowledge production needed to address persistent vulnerability.

Citations

  Paulo, Brazil. 14(3).

Key Words: environmental hazards, flooding, institutional ethnography, institutional change

SPATIAL COUPLING MECHANISM OF BLUE-GREEN-GRAY INFRASTRUCTURE THROUGH A PERSPECTIVE OF
RESILIENCE

Abstract ID: 499

Individual Paper

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The expansion of urban impervious surfaces increasing the risk of urban flooding (Dewan, 2013; Roy et al., 2014),
combining impacts of climate change, poses a serious challenge to urban stormwater management. Many studies
presented connecting and integrating blue-green infrastructure can reduce urban flood risk and simultaneously
generate additional benefits, but gray infrastructure remains the foundation of the urban drainage system (Fu et
al., 2019a; Xu et al., 2019). Therefore, coupling Blue-Green-Gray Infrastructure (BGRI) is one of best pathways for
urban stormwater management and urban resilience. Although current research has focused on the allocation and
connection of green-gray infrastructure based on landscape ecology methods, hydrological processes, and spatial
suitability analysis, there still lacks of a systematic design for spatial scale, allocation, and connection of BGRI by
coordinating and integrating BGRI into an organic network. We proposed to apply resilient planning methods like
vulnerability analysis and adaptive design to explore the spatial coupling mechanism of BGRI. By constructing a
multi-scale spatial analysis model and sub-catchment division criteria, the watershed was divided into blocks for
blue-green infrastructure installations and sub-catchments for BGRI connections. Moreover, the high-risk
waterlogging locations identified by vulnerability analysis and suitability assessment derived from technical
feasibility, space availability, and combinability were combined for the priority allocations for BGRI. Last, adaptive design, hydrological process, and ‘source-way-sink’ functions were used to construct the spatial connection mode and order for BGRI. We selected Fengxi New Area, Shaanxi Province, China, as the study area, which was the representative of the first batch of pilot sponge cities in China. We have divided Fengxi New Area into 6 sub-watersheds and 281 blocks, and applied the AHP method to assign weights to vulnerability and suitability indicators. We also conducted an overlapping analysis for various indicators to obtain the vulnerable locations with waterlogging risk and suitability map for green roofs, rain gardens, porous pavements, and pond (i.e., retention basin, a kind of blue infrastructure). Five scenarios were developed, covering most of installation situations of BGRI in urban area, including close to ponds, close to rivers, located in urban waterlogging risk areas, located in areas with weak stormwater regulation infrastructure, and located near important buildings/facilities. The guidelines and patterns of spatial connection were constructed for each BGRI installation scenario. This study would provide an adaptive strategy for guiding the construction of multi-pathway stormwater regulation networks, assisting planning process and decision-making of urban stormwater infrastructure planning and flooding mitigation planning, and improving urban flood control and disaster reduction capabilities.

Citations


Key Words: blue-green-gray infrastructure, spatial coupling mechanism, stormwater management, urban resilience

AN AGENT BASED MODEL OF THE EFFECTS OF FISCAL FEDERALISM ON MANAGED RETREAT

Abstract ID: 516

Individual Paper

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As climate change threatens urbanized coastal regions, adaptation and research into its implementation have become paramount. One adaptation strategy which has garnered significant research interest is managed retreat through property buyouts. While managed retreat can significantly decrease a coastal municipality’s vulnerability to climate change, it may also significantly increase its vulnerability to fiscal stress. A 2020 paper by Shi and Varuzzo has highlighted that managed retreat may threaten municipalities’ fiscal solvency and overall viability. Another 2020 paper by BenDor et al. models the effects of managed retreat and property buyouts on municipal finances. Recent research makes clear that managed retreat can negatively affect municipal finances. But do municipal finances affect decisions around managed retreat? That is, is there a reverse causal relationship? In this research, we ask if municipalities which rely primarily on local taxes (e.g. property taxes) approach managed retreat differently than municipalities which rely primarily on intergovernmental transfers from higher levels of government. Do different patterns of fiscal federalism — what Oates would call revenue sharing in his classic essay on the subject — as well as different patterns of reliance on property tax revenues have any effects on a locality’s willingness to engage in managed retreat as opposed to rebuilding after a destructive coastal storm event? Are
municipalities that rely less heavily on local taxes and more on intergovernmental transfers more likely to accept managed retreat measures as opposed to rebuilding than municipalities whose finances would be threatened by the loss of properties?

By using an agent based model (ABM), we are able to model the effect of different compositions of municipal revenue — the ratio of intergovernmental transfer revenues to property tax revenues — on a municipality’s willingness to engage in managed retreat over rebuilding after a coastal storm event. Using the ABM, we can also model the game of fiscal federalism to see if a state-level government’s desire to decrease coastal vulnerability through encouraging managed retreat over rebuilding leads to offers of larger sums of intergovernmental transfers to localities. In addition, the model is able to simulate the dynamics of overall municipal fiscal health and municipal “mortality” when met with a series of synthetic, destructive coastal storm events. Through this, the model is able to theoretically verify findings from researchers such as Shi and BenDor. Does managed retreat lead to a so-called fiscal “death spiral”?

Models have been calibrated and then verified using real world data on coastal managed retreat along the New Jersey shore, specifically the administrative data sets on residential buyouts under the NJ Blue Acres program and multiple FEMA programs, the NJ MOD IV property taxation database, and the NJ User-Friendly Municipal and School District Budgets databases.

Implications for planning include appreciating that municipal revenue sources affect likely strategies for adaptation to climatic hazards, and recognizing the need to engage policymakers in reorienting municipal finances in such a way as to reduce resistance to buyouts.

Citations


Key Words: managed retreat, agent based model, municipal finance, fiscal federalism

THE IMPACT OF CLIMATE GENTRIFICATION ON LOW-INCOME COMMUNITIES AND PUBLIC POLICY RESPONSES

Abstract ID: 517
Individual Paper

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As climate change impacts multiply against a backdrop of insufficient affordable housing, the scholarship reflects a mounting concern for spatial and financial stability, resilience, and social equity. Populations vulnerable to displacement include lower-income communities, disproportionately represented by minorities and immigrants. This analysis highlights how scholars define climate gentrification, a complicated form of gentrification in which climate risk, associated impacts, and interventions may induce displacement and disparity entrenchment. In addition, this analysis identifies policy strategies to address climate gentrification and suggests a model for understanding climate gentrification causes, impacts, and responses.
Climate gentrification (CG) is an evolving field of study since it appears at the intersection of evolving climate change impacts and responses. Keenan et al. (2018), identified three pathways to CG by which climate change impacts may drive investment and settlement patterns: investment choices, increased consumer cost burdens, and public resilience investments that drive up the property value. Since 2006, the number of publications across disciplines mentioning CG and planning has increased each year—755 items. This review seeks to define CG by asking: 1) When and how often does climate gentrification appear in the literature in connection with planning? 2) How do scholars frame climate gentrification? 3) What policy and planning contributions can climate gentrification scholarship provide?

Publications were identified by searching Google Scholar. To contextualize CG usage, we coded and categorized the results using the title of the publication and the discipline of the journal. However, the collection of publications is not exhaustive in understanding and mitigating CG as a subset of urban mobility. Therefore, we also reference literature on gentrification and displacement, housing, mobility, and other fields, highlighting social justice concerns and policy responses. Finally, from these interconnections, this review introduces a model for understanding and planning for climate gentrification.

Our model summarizes the pathways to climate gentrification, policy responses to reduce climate related gentrification, and the unintended gentrification consequences of climate mitigation and adaptation policies. On the one hand, climate mitigation and adaptation policies reduce the negative impact of climate change, while on the other hand these policies could potentially cause or exacerbate climate gentrification, if not implemented with equity in mind. Public intervention and investment and private investment choices can increase property values and increase consumer cost burdens, therefore linking to gentrification and climate gentrification. Meanwhile, lack of affordable housing plays the key role in contributing to gentrification and climate gentrification; therefore, affordable housing policies are the key to reducing gentrification and climate gentrification. Combined with land use, zoning, and transportation policies, supportive services to support displaced households or businesses, and equity-centered climate mitigation and adaptation policies, we may be able to prevent climate gentrification and mitigate the negative impact of climate gentrification on individuals, households, and neighborhoods. Therefore, policy must address both gentrification and climate. Responses need to exceed the traditional policies, such as land use, transportation, and housing policies to increase the supply of affordable housing and to provide housing subsidies, to include equitable climate adaptation and mitigation policies that minimize climate-related gentrification.

Citations


Key Words: gentrification, climate, housing, equity

LOCAL DYNAMICS OF JUST ENERGY TRANSITIONS: COMPARING STATE AND LOCAL POLICY IN LOUISIANA AND KANSAS

Abstract ID: 523
Individual Paper

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Energy transitions are underway across the United States, with many local governments, states, and the federal government calling for rapid deployment of low or zero-carbon energy technologies in tandem with a need to address local environmental injustice and economic revitalization. Just energy transitions span issues of justice central to climate, energy, and environmental policy (Carley and Konisky 2020; McCauley and Heffron 2018). Core elements of just energy transitions (e.g., energy justice, technology and infrastructure change, and energy policy) have more frequently been addressed by fields adjacent to planning, including science and technology studies (STS) and public policy, while other elements, such as environmental justice, siting, land use, and public engagement, are already active areas of scholarship in environmental planning. In this paper, we bring planning scholarship and practice more directly into dialogue with just energy transitions scholarship to respond to a call for a greater focus on community-level dynamics (Bazilian et al. 2021).

We develop a theoretical framework for planning in just energy transitions to bridge federal and state policy with local and place-based just energy transition dynamics. We build on a recognition of the timeliness of just energy transitions to the field of planning and the multiple ways more traditional areas of planning can engage with energy transitions (Scott 2022). Using an embedded bi-state comparative research design, we use policy and legal document analysis, interviews, and secondary data to examine state-level and local, place-based transition dynamics. We ask: a) how are energy justice issues emerging in state and local policy in Kansas and Louisiana, and b) what factors influence place-based just energy transition priorities?

Our findings point to common and place-specific considerations for just energy transitions and suggest pathways for planners to engage more directly in timely energy transitions debates, decisions, and investments. This work is part of a larger interdisciplinary (planning, geography, and law) project to understand place-based dimensions of just energy transitions in four case study states: Kansas, Louisiana, Florida, and Pennsylvania.

Citations


Key Words: energy, just transitions

URBAN FORESTS, CLIMATE CHANGE, AND REGULATORY TAKINGS: A KNOTTY VARIATION ON AN ENDURING THEME
Abstract ID: 527
Individual Paper

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Trees and forests are vital components of terrestrial ecosystems (Schwab, 2009; Safford et al., 2013). They provide a variety of benefits to individual property owners and to society as well. For example, they create cool shade, absorb and clean stormwater, reduce air pollutants like ozone and particulates, and foster corresponding public health benefits (i.e., through moderated temperatures, reduced sun exposure, improved air quality, and enhanced
mental health) (Schwab, 2009). For these reasons and because of the aesthetic benefits mature trees provide, trees and wooded lots in urban settings enhance property values (Profus and Loeb, 1990). Unhappily, the distribution of trees is also associated with social inequity, where lower tree canopy corresponds strongly with more racially and socio-economically segregated residential neighborhoods (Locke et al., 2021; Koman et al., 2019).

All these benefits and concerns are heightened because of climate change. Trees mitigate climate change by sequestering carbon, and they provide valuable services for climate adaptation by tempering heat island effects, stormwater flows, and corresponding public health impacts (Safford et al., 2013). And yet to the extent that tree canopy coverage remains inequitably distributed, the impacts of climate change will be felt more harshly by historically disadvantaged residents.

There are growing calls to preserve trees where they are and to plant more of them, both to respond to climate change and to redress urban social inequities (e.g., Schwab, 2009). Indeed, local ordinances that regulate the removal and conservation of trees are now commonplace (Profus and Loeb, 1990), and there are now numerous guidebooks available to assist localities looking to plan for and adopt or improve such ordinances (e.g., Swiecki and Bernhardt, 2001; Nichols, 2007; Schwab, 2009; Safford et al., 2013; Bardon et al., 2019). But it’s not enough merely to justify why tree conservation is important; regulations adopted to do so must pass legal muster too. Most contemporary tree conservation guides address the authorities required to adopt such ordinances and the legal protections that apply to them generally. Some identify specifically the potential for a private property owner to assert that a regulation that compels the preservation of trees on site—or payment of fees into a tree replanting fund—amounts to a regulatory taking of private property (e.g., Duerksen, et al., 1997; Nichols, 2007). These cautions are abstract, however, without providing much insight into how courts might respond to such claims or how ordinances might be crafted to withstand such a constitutional attack accordingly.

Several cases involving a local tree preservation ordinance in Michigan have been working their way through the federal and state courts—F.P. Development v. Canton Charter Township, and 44650, Inc. v. Canton Charter Township, respectively. These cases articulate precisely the complex tensions arising between imperatives for tree preservation given climate change, on the one hand, and claims of regulatory takings, on the other—tensions that reflect the broader and persistent debate between the need for regulation to abate public harms and promote public welfare set in tension with the need to respect private property rights. Drawing from historical and legal analysis underlying the issues at hand, content analysis of the court filings presenting the arguments of the parties and the decisions of the courts, and synthesis of those analyses with contemporary scientific knowledge regarding tree and forest ecology, this paper will provide a robust justification for the need for regulation of private property to ensure tree and forest preservation and conservation, as well as guidance for ensuring such regulation is both effective and legally reasonable.

Citations

EXAMINING THE IMPACT OF UNEQUAL STORMWATER INFRASTRUCTURE DEVELOPMENT ON LOCALIZED FLOOD DAMAGES IN THE CITY OF HOUSTON, TEXAS

Abstract ID: 539
Individual Paper

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Due to extreme rainfall events intensified by climate change and rapid urbanization, urban flooding has become a growing threat. Environmental Justice (EJ) and social vulnerability researchers have examined that people of color and low income are disproportionately located in floodplains and suffer more from flood impacts (Collins et al., 2019; Highfield et al., 2014; Zahran et al., 2008). Stormwater management infrastructure plays a crucial role in urban flood damage levels by mitigating surface runoff. However, research on EJ and social vulnerability has disregarded the impacts of stormwater infrastructure development on urban flooding.

This study investigates the impacts of the inequities in stormwater infrastructure development by type on localized flood damage levels during hurricane Harvey in the city of Houston, Texas. We conduct multilevel regressions of the street segment level (the smallest unit, in which infrastructure elements tend to have similar characteristics) and the census block group level (the smallest neighborhood unit, in which racial and ethnic characteristics of residents are provided). The analyses are based on the spatially merged secondary datasets at the street segment and block group levels in the Geographic Information System (GIS). To examine the extent of localized flood damage, we only include flooded buildings outside of floodplains and exclude ones in floodplains, which may be flooded due to riverine flooding.

Our preliminary findings provide evidence for hypotheses suggested by the EJ and social vulnerability literature (Hendricks & Van Zandt, 2020). First, street segments in block groups of privileged people and having higher appraisal values are inclined to have lower flood damage levels, compared to street segments in underserved block groups and of lower appraisal values. Second, street segments with a higher density of stormwater conveyance infrastructure, a higher density of storm sewers, a lower density of roadside ditches, and more sewers than ditches tend to have lower flood damage levels. Third, street segments of higher appraisal values and privileged groups are more likely to withstand flood damage because the streets have a higher density of stormwater infrastructure and are dominated by storm sewers than roadside ditches.

This study adds insight into EJ and hazard vulnerability research by first examining the impact of inequities in stormwater infrastructure development on localized flood damages. The findings of this study have implications for equitable stormwater management while developing flood mitigation strategies in capital improvement and land use plans.

Citations


Key Words: Stormwater management, Hazard vulnerability, Social vulnerability, Environmental Justice (EJ), Floods

DO LOW-INCOME COMMUNITIES WITH LOWER HEAT RISK AND LOWER AIR POLLUTION GENTRIFY IN HOT HOUSING MARKETS? FINDINGS ABOUT CLIMATE GENTRIFICATION IN LOS ANGELES

Abstract ID: 547
Individual Paper

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Introduction. Due to global climate change and urban heat island intensification, the frequency and intensity of heat waves are increasing. Although the amount of air pollution in the US has been consistently decreasing, this issue still causes significant negative health impacts. Previous studies reported in the US annually about 5,000 excess deaths due to extreme heat and 100,000-200,000 deaths due to exposure to air pollution. In addition, low-income people of color are disproportionately exposed to extreme heat and air pollution. Green infrastructure can help mitigate heat waves and air pollution, but it is not equitably distributed. Efforts to increase green infrastructure provision in low-income communities of color have resulted in “green gentrification,” describing the influx of wealthier residents due in part to the implementation of such infrastructure. Limited research in this area has focused on the impact of extreme heat and air pollution mitigation on gentrification and how the quantity of green infrastructure, which can mitigate the impacts of heat and pollution, affects gentrification.

Research goals. This study focuses on the following research questions. 1) Do nearby environmental conditions (green infrastructure, built environment, and water quantity) affect extreme heat and air pollution, which in turn affects housing prices? 2) Also, did these environmental and climate factors substantially impact housing prices recently rather than before, especially in low-income and high-minorities neighborhoods? Therefore, in this study, focusing on the individual housing unit level, the relationship between nearby green infrastructure's quality and quantity, climate conditions (thermal environment and air pollution), and housing prices will be investigated.

Methods. Focusing on the Los Angeles urbanized area, we model whether gentrification was occurring in recent years due to green infrastructure provision and climate conditions (thermal environment and air pollution) within a quarter mile of properties. We focus on properties located in gentrification-eligible census tracts (median household income below the cities’ median) and analyze gentrification in three periods (2003-2008, 2009-2014, and 2015-2021). We use data from Zillow’s ZTRAX for the sale prices of single-family units, MODIS using Google Earth Engine for ground PM.2.5, and Landsat 7 and 8 using Google Earth Engine for Normalized Difference Vegetation Index (NDVI), Normalized Difference Built-up Index (NDBI), Normalized Difference Water Index (NDWI), and Land Surface Temperature (LST). We fit Partial Least Squares Structural Equation Models based on Hedonic Price Model to understand the direct and indirect effect of environmental conditions and climate conditions on housing prices and gentrification for each study period. The dependent variable is the natural log of the sale price of single-family homes, and the main independent variables are NDVI, PM.2.5, and LST. We control for property characteristics and neighborhood characteristics (e.g., location, demographics) that affect property values. We also run specific models by race and ethnicity.

Results. The findings reveal some evidence of gentrification due to climate and environmental inequity in Los Angeles urbanized area. Specifically, as a direct effect, the quality and quantity of green infrastructure in the neighborhood are positively associated with housing prices. In indirect effect, increased green infrastructure resulted in decreased surface temperature and air pollution, and in the end, housing prices increased. This pattern
was more significant recently, especially in places with lower incomes and larger shares of minority populations.

Implications. Our results suggest that increased green infrastructure can induce gentrification, not only due to the direct impact but also due to the indirect effect caused by the climate change mitigation effect, as this phenomenon can be particularly prominent in low-income and high-minority neighborhoods. These results can serve as a reference for planners and policymakers to prioritize affordable housing and green infrastructure investment with the aim of equitable distribution of its benefits.

Citations

- Rigolon, A., & Németh, J. (2020). Green gentrification or ‘just green enough’: Do park location, size and function affect whether a place gentrifies or not?. Urban Studies, 57(2), 402-420.

Key Words: Climate justice, Environmental justice, Gentrification, Green infrastructure, Urban Heat Island

UPSIDES TO OUTSOURCING? PUBLIC AND PRIVATE PLANNING FOR HAZARD RISK REDUCTION

Abstract ID: 567
Individual Paper

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Shortages in planning service capacity like staffing and specialized expertise commonly lead local governments to contract with private consulting firms. In recent decades, an increasing number of communities have hired private firms to conduct planning in domains like hazard mitigation, transportation, and economic development under the assumption that privately conducted planning services are more cost-effective and can bring additional information, analysis, and insight (c.f. Loh and Norton 2013, Lapuente & Van de Walle 2020). From a local government perspective, private consulting firms also may bring complementary ability to navigate the external environment to secure resources such as federal grants (Meier & O’Toole 2011). Meanwhile, private consulting firms complete tasks assigned by governmental clients in order to sustain business viability and serve firm goals and values (Voorn et al. 2017). Planning scholars have only scratched the surface, however, of understanding the impacts of contracting out planning services.

In this paper, we seek to add insight on three questions with theoretical and practical implications: 1) What do local government officials view as the respective tradeoffs when working with private consultants? 2) Is the involvement of private consultants associated with variations in plan quality across different components of plans (e.g. public engagement as compared to goals and actions)? And, 3) Is involvement of private consultants associated with variations in local success in securing federal planning-related grants?

To answer these questions, we employed a multi-state, comparative research design in the context of planning for long-term risk reduction. Planning to reduce long-term risks from natural hazards and climate change provides an
excellent test bed for investigating these questions, as has been done by numerous planning and policy scholars over the last four decades (c.f. Berke, Lyles, and Smith 2014). Failure to sustain high-quality hazard mitigation planning results in repetitive losses of human lives and property damages, which led the federal government to pass the Disaster Mitigation Act of 2000 providing one of the few national planning frameworks in the US.

In the fall of 2022, we conducted web-based surveys of local officials who lead the hazard mitigation planning in 124 communities across the southeastern and midwestern United States. Questions covered a broad spectrum of topics, including involvement of consultants. We couple the survey data with systematic plan coding data and federal funding data available from "OpenFEMA." Together, these datasets allow us to conduct a) quantitative analysis, including regression modeling of the influence of consultant involvement on plan quality and federal grant success; and b) qualitative analyses of local official perspectives on the positive and negative influences of consultant involvement.

Our findings indicate that local officials have mixed attitudes towards contracted planning services for hazard mitigation. An example of variations includes a distinction based on community size. Small jurisdictions lacking planners urgently need consultants to develop plans to stay eligible for federal funding, while some larger jurisdictions only want consultants to assist with grant management because they have their community planners who have already gained the residents’ trust. Ongoing analysis sheds light into relationships between consultant involvement and plan quality and federal funding success.

Citations


Key Words: contracted planning, hazard mitigation, planning outcomes, Disasters, risk reduction

DRIVERS OF TREE CANOPY LOSS IN A MID-SIZED URBANIZING U.S CITY: CASE STUDY IN PORTLAND
Abstract ID: 594
Individual Paper

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The benefits of the urban tree and tree canopy (UTC) are increasingly an important consideration in addressing climate change and human health. Therefore, cities have a mission to preserve the existing UTC and plant additional trees. Also, distributional inequities in the presence of UTC is highlighting the social implications of effective management, and municipal governments are attempting to understand the dynamics of gains and losses as they impact local residents. While extant studies focus on the planting effort and single-point time assessments, less known is the dynamics of UTC loss, across time and location, which, we argue, is instrumental to advancing effective UTC conservation and management. The aim of this study is to understand the dynamics of UTC change, especially canopy loss, and to investigate the drivers of the loss. We ask two specific research questions; (1) what is the spatial distribution of UTC change, both gain and loss, and (2) what are the key factors/drivers of UTC loss? We
address these questions by providing the maps and developing a statistical model to understand the factors that lead to UTC loss. The study draws on a high-resolution dataset of an urban canopy in the city of Portland (Oregon, USA), assessing changes in UTC between 2014 to 2019. By integrating demographic, biophysical, and policy data with UTC, we use a spatial autoregressive model, a spatial error regression, to identify the drivers of UTC loss. The result of the study identified that there is an unexpected spatial distribution of UTC change, less gain in the least UTC neighborhood, and greater loss in the moderate UTC neighborhood. It showed that city’s effort on equitable UTC distribution should be reconsidered. Furthermore, the study identifies four drivers/indicators of UTC loss: socioeconomic characteristics, urban form, activities on trees, and residential status. Population density, race, and income have an impact on canopy loss as well as building footprint and the number of multifamily housing units. Also, activities on trees, both planting and cutting, tend to increase UTC loss. Lastly, residential statuses, such as owner-occupied housing proportion and residential stability, have an influence on canopy loss. To achieve the city’s 2035 canopy goal, there is a need to understand the dynamics of UTC loss to develop a more effective tree management policy in the urban area. Based on the results of the study, we provided the recommendations such as focusing on UTC preservation in moderate canopy neighborhoods as well as planting new trees in underserved communities, encouraging multifamily housing unit development, the need for strategies to preserve existing trees when new owners move into housing, and monitoring system to minimize both reported and unreported tree cuts.

Citations

- Guo et al. (2019) "City-wide canopy cover decline due to residential property redevelopment in Christchurch, New Zealand," Science of the Total Environment: Vol 681

Key Words: Urban Tree Canopy (UTC), Canopy Loss, Urban Tree Management, Green Infrastructure, Urban Forest

WHICH WATER SUPPLIERS ARE UNDERSERVED AND OVERBURDENED? A MULTIDIMENSIONAL CLASSIFICATION OF VULNERABILITY UNDER CLIMATE STRESS

Abstract ID: 619
Individual Paper

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Across the United States, there are approximately 51,000 community water supply systems, varying in need and available resources. Approximately 80% of systems serve less than 3,300 people, the U.S. EPA’s definition of a small system, and have a median annual income of $138,000 or less. Many researchers and government officials are interested in identifying which of these systems are most at-risk, an issue elevated by the U.S. federal government’s Justice40 initiative. The Justice40 initiative seeks to ensure that 40% of federal investments are targeted toward underserved and overburdened populations, specifically noting the development of water infrastructure as one of the investments in focus. Which water suppliers should be prioritized when allocating funding?
This study classifies vulnerability of water supply systems, focusing on water suppliers along the mid-Atlantic, south-Atlantic and Gulf coasts. The study area has known climate threats, highly disaggregate water institutions, inconsistent state-level water policy coordination, and many low-income communities. Yet, it can be challenging to verify which water suppliers are most underserved and overburdened because of missing data. One of the most basic challenges is a lack of consistent water supplier boundary information. This makes it difficult to understand the demographics of who is served in a given water supplier, since it is not possible to perform simple intersections with American Community Survey (ACS) data.

This study proceeds in three parts. First, we develop a novel database on water supplier characteristics. We do so by estimating synthetic water system boundaries with known water intake locations. We validate the boundary estimation method in two states with known boundaries, finding high correlations between the synthetic and known boundaries. We scale the boundary generation method to states with unknown boundaries. Using the new water supplier boundaries, we calculate climate, physical infrastructure, and socioeconomic attributes for all systems in the study area.

Then, using clustering methods, we create tiers of water supplier vulnerability. We consider which systems are most vulnerable due to: (1) climate threats; (2) physical infrastructure; (3) socioeconomic characteristics. We also evaluate combinations of threats: (1) climate-socioeconomic; (2) physical-socioeconomic; (3) climate-physical; (4) climate-physical-socioeconomic. We discuss which water suppliers are consistently classified as most vulnerable.

Finally, to test the validity of the clusters, we regress the number of Safe Drinking Water Act violations on the water suppliers by cluster. We find the clusters showing evidence of higher rates of violations align with those that are most vulnerable. We conclude by discussing advantages and disadvantages of classification to identify underserved and overburdened suppliers and prospective state-level interventions that can ensure the appropriate suppliers are reached through the Justice40 initiative.

Citations

- Environmental Policy Innovation Center, 2022. A national map of water service area boundaries can support Justice 40 goals and other federal programs. https://www.policyinnovation.org/blog/service-area-boundaries-j40-case-study

Key Words: environmental justice, climate vulnerability, drinking water

EXAMINE ENVIRONMENTAL INEQUITY IN HEAT EXPOSURE UNDER A RAPID URBAN GROWTH AND REGREENING CONTEXT — CASE STUDY IN A SUN-BELT CITY FROM 2000 TO 2020

Abstract ID: 669

Individual Paper

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In the past few decades, the United States has experienced a nationwide extreme heat wave, making urban heat land management, particularly urban heat island mitigation, increasingly crucial. As a subtropical "sun belt" region in the United States, the Charlotte metropolitan area has implemented various re-greening projects, including greenways, eco-friendly housing, and bike lanes, to mitigate extreme heat over the past two decades. To assess the effectiveness of these projects in mitigating the urban heat island effect and examine environmental inequity in heat exposure, spatial analysis was conducted on Google Earth Engine using satellite imagery, land use and land cover data, social census data, and planning documents. Land surface temperature changes in the Charlotte metropolitan area over the past 20 years were measured. The study also evaluated whether the heat-vulnerable group benefited from the re-greening projects to study environmental inequity. The results indicate that urban re-greening projects in sun-belt regions like the Charlotte metropolitan area mitigated the urban heat island effect, especially in the city center and the corridors of the city periphery. Nonetheless, the vulnerable group, such as senior citizens and the low-income group, could hardly benefit from environmental improvement projects due to environmental gentrification and displacement amid rapid urbanization. Hence, it is vital to focus more attention on these vulnerable groups and communities to address environmental inequity issues in extreme heat exposure.

Citations


Key Words: Heat exposure and vulnerability, Environmental inequality and displacement, Geo-computation, Displacement

FAILING TO ACT? OR ACTING TO NOT FAIL? LOCAL GOVERNMENT DAM MANAGEMENT DECISIONS ABOUT AGING AND AT-RISK DAM INFRASTRUCTURE

Abstract ID: 686
Individual Paper

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In 2020, the rural Edenville Dam, located upstream of the cities of Sanford and Midland, Michigan, failed after a historic 500 year rain event. Over 11,000 people were forced to evacuate from their homes, and 2,500 structures were damaged, requiring $250 million dollars in repairs. Dams provide life supporting services, such as flood control, water supply, and hydropower, but remain a hidden form of infrastructure. Yet aging dams, increasing intense precipitation events, and growing development pressures around dams present grave risks to people and critical infrastructure downstream in the event of failures. Local governments own over 18,000 of the 90,000 dams in the United States, roughly 7,000 of which present significant and high hazards to downstream communities. Little empirical evidence exists about how local governments make tradeoffs between community priorities and risks from aging and at-risk dams. Despite the risks that dams pose to communities, few strategies and little funding exist to support local governments in proactively managing their dams.
In this project, I ask: 1) How do local governments decide when to repair or remove at-risk, aging dams?; and 2) How do the combinations of contextual and process factors differ between local governments that choose removal versus modification? To answer these questions, I developed a survey targeting 1,200 local government dam managers across the country. To compare local governments that have acted to address issues with their dams and those who have not acted, I selected the population of 67 local governments that removed their dams since 2010, the population of 219 local governments that modified their dams since 2010, and an additional 919 local governments that have neither removed nor modified their dams according to the US Army Corps of Engineers National Inventory of Dams. Survey questions center on the concerns that local governments have with their dams, climate change related stressors they anticipate experiencing, the needs their dam meets in the community, and the formal and informal actors who participate in discussion and decision making about the dams. I use multinomial logit regression to analyze the significance of the various decision factors (independent variables) in determining the dam management outcome (dependent variable). Multinomial logit regression allows for the analysis of decision factors and more than two possible outcomes, producing coefficients that act as proxies to weigh the importance of and the positive or negative impact of decision factors.

The survey results reveal a variety of recommendations for proactive, climate responsive, and community centered local government dam management. Locally owned dams present management challenges as local governments oversee land use, while water and dam regulation occurs at the state level. Findings from this are critical to informing local, regional, and national strategies for dam management, and how best to allocate $2.3 billion in funding for dam removals, retrofitting, and rehabilitation from the National Infrastructure Bill. This research also raises the visibility of this foundational, yet still too hidden infrastructure.

Citations


Key Words: Dams, Environmental Planning, Climate Change, Infrastructure, Risk

THE STATUS OF COOL ROOFS IN NEW YORK CITY AND THE ROLE OF LOCAL LAWS IN EXPANDING THEM.

Abstract ID: 717
Individual Paper

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The urban heat island effect is a known phenomenon that makes urban areas warmer by about 1-3°C. The impact of urban heat is significant on public health and energy use (Jungman et al., 2023). In the past decade, there have been numerous studies on the nature of urban heat, its drivers, and its consequences (Heris et al., 2020 and Marandeo et al., 2022). One area still in development is how planning policies and regulations can systematically...
mitigate urban heat. Zoning, design guidelines, and building codes are central to understanding how we can modify policies to address urban heat issues (Heris et al., 2019). In addition to trees and vegetation, cool roofs mitigate urban heat intensity and save energy use in summers. In this study, we investigate the local laws in New York City designed to increase roof reflectivity. Local law 21 of 2011 required all new buildings and roof replacement of buildings with a certain size to coat the roof with reflective materials. Local laws 92 and 94 of 2019 passed by NYC’s city council were designed to expand the enforcement on all buildings to use sustainable roofing zones that include the combination of cool roofs, green roofs, and solar panels (City of New York, 2019). We used high-resolution orthoimages of 2010, 2012, 2014, 2016, 2018, and 2020 to measure the roof reflectivity of all building footprints in NYC at high resolution. Orthoimages offer four bands (Blue, Green, Red, and Infrared) that are appropriate for measuring the brightness of roofs. We used an algorithm that measures Albedo from Landsat 8 images and then creates a linear model to estimate Albedo from ortho images. We created a reflectivity score that ranges from zero to 100. Our method provides an accuracy of 95% in identifying cool roofs and conversions of dark to cool roofs. Our studies show that currently, 39% of all roof areas in the city has coated with reflective materials. The rate of converting dark roofs to cool roofs has been about 1% annually, which is considerable progress. However, we found that a substantial fraction of buildings also regressed and converted their cool roofs to dark roofs. Despite a slow rate of cool roof expansion, the city has managed to increase the roof reflectivity of NYC’s public housing (NYCHA) buildings through a cool roof program that was designed for labor training. Our study shows that between 2014 and 2020, 30% of NYCHA’s buildings were coated with reflective materials. Despite overall slow progress in the expansion of cool roofs, the city’s targeted efforts have converted the roofs of low-income housing units, which positively impacts environmental justice. This entails further investigations of institutional procedures of development reviews and enforcement processes to identify barriers to enforcing cool roofs.

Citations


Key Words: Urban Heat, Cool Roofs, Land use and Zoning Policies, Environmental Justice, Climate Adaptation Policies

PERSISTENCE IN PLANNING: PROCESS, ENGAGEMENT, AND EQUITY IN LOCAL CLIMATE PLANNING

Abstract ID: 761
Individual Paper

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What makes a planning effort “successful?” Our paper explores this question within an emerging and crucial realm of planning scholarship and practice: climate action and adaptation planning. We outline the specific factors that
contributed to the implementation of an innovative public engagement campaign in an exemplary case study location, Douglas County, KS. The case examines if and how extensive public engagement in climate planning efforts, as well as the impact of relational networks and adaptive champions, can support equity-centered climate plans and processes. Crucially, the relationships built as result of this public engagement effort enabled this planning process to maintain momentum despite multiple setbacks, including a global pandemic, funding limitations, and significant staffing changes.

Drawing heavily from local hazard mitigation and disaster planning scholarship, climate action and adaptation planning focuses on local actions to both reduce greenhouse gas emissions and adapt to the long-term impacts of the climate crisis (Boswell, Greve, and Seale 2019). Existing disaster planning scholarship has explored different limitations and motivators to implementing successful planning practices (Birkland 2006, Lyles, Pennel, and Riley 2021). Further, public engagement scholarship outlines the most effective and inclusive engagement strategies available in our field to advance social justice (Lyles and White 2019, Arnstein 1969). We connect these threads by proposing a new framework for public engagement in climate planning, and use that framework to answer three main questions: 1) What public engagement activities did Douglas County, KS employ and how are those efforts unique? 2) How and why did the actors within this planning process succeed? And 3) how, as planners, can we replicate their actions in our own communities?

To answer these questions, we highlight one local climate planning process at two scales: First, we identify the public engagement methods utilized by local officials in Douglas County, KS as part of their ongoing climate action planning process, and their relationship to advancing social equity and justice objectives. Second, we review the internal collaborative efforts that made for an overall effective climate planning process. Data collected for this project includes hundreds of hours of participant observation over 4- years, document review of planning documents, city/county presentations and memos plans, local media reports, online survey results, and community interviews conducted by local community coordinators. We also share “practice-focused oral histories” (Forrester, 2006) from local officials and grassroots organizers about their experience as part of a collaborative public engagement process.

Our findings shed light on the value of investing both financial and relational resources directly into the community when conducting climate planning efforts. Specifically, our case study describes a public engagement strategy that is overall stronger, more diverse, and more inclusive than the average climate plan’s public engagement effort. We find evidence that public engagement processes that are designed with awareness of existing legacies of factors like housing discrimination, environmental injustices, and structural racism, as well as local history, facilitate a more nuanced understanding of climate concerns, local knowledge, and social considerations than what comes up at a public meeting or in a one-off survey. Further, investing money into the communities from whom input is sought yields stronger overall engagement and builds trust. We conclude with a) recommendations for planning practitioners seeking to expand their public engagement efforts, and b) theoretically grounded concepts and novel protocols for future scholarship in both public engagement and climate planning.

Citations

FROM "FULL WATER CONTROL" TO "ACTIVELY LIVING WITH WATER" IN PLANNING FOR VIETNAM'S MEKONG DELTA

Abstract ID: 764
Individual Paper
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In the second half of the 20th century, as the Dutch completed their large-scale engineering projects at home and as colonial experts abroad lost employments following projects of independence, the Netherlands began to formulate their water engineering services as an expert product. This project of exporting expertise also meant the export of highly regulated Dutch water management concepts such as pumps and polders which often sat uneasily in the vast deltas and powerful rivers of Southeast Asia. I build on scholarship on the landscape as an active agent in politics and development in Vietnam’s Mekong Delta, providing a history of (4) Dutch-authored plans for the Mekong Delta. I begin with the 1974 MRC-sponsored Mekong Delta Development Plan, which as part of a larger strategy to harness the lower Mekong, advocated “Full Water Control” and end with the most recent Mekong Delta Integrated Regional Plan, authored by Dutch consultants for the Ministry of Planning and Investment, which is framed around climate change adaptation, and adopts language of actively living with flooded, brackish, and salty water conditions. With this overview of the historical planning landscape, I focus on how each plan represents what the delta is, and why a plan is needed. In other words, I frame plans as a form of “representation” following Peattie (1987), to ask how these foreign experts’ tools for representing the delta shape the methods they employ to plan it. I also draw throughlines of how each plan carries through prior concepts – such as the South Mang Thit irrigation scheme included in all 4 plans. Yet, the delta often resists control, with newer plans solving problems (urban flooding, nutrient deprivation) explicitly created by earlier planned schemes. In this sense, how do contemporary propositions for managing and developing the delta create the potential for the construction of future environmental risks?

This paper represents a chapter of my larger doctoral dissertation examining urban and regional climate change adaptation planning in Vietnam’s Mekong Delta. I draw one year of multi-sited fieldwork in Vietnam, the Netherlands, and the Cambodian Mekong Delta, and approximately 200 qualitative interviews with experts, officials, and residents. This chapter in particular draws on interviews with involved experts, document review of the four plans, and archival research in the Netherlands and Vietnam.

Citations


Key Words: climate planning, public engagement, planning process, equity

Key Words: water infrastructure, climate change adaptation, regional planning, expertise, representation
UNDERSTANDING AND RESPONDING TO URBAN PLUVIAL FLOODING IN SOUTH MEMPHIS THROUGH COMMUNITY-ENGAGED RESEARCH
Abstract ID: 773
Individual Paper

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Many historically disinvested and majority-minority communities of the United States often do not have the capacity to respond to and recover from climate change impacts like flooding—a challenge becoming more apparent given the projected increases in intensity and severity of extreme rainfall events (U.S. Global Change Research Program, 2018). These communities are also confronted with a prioritization conundrum of whether to address their socio-economic challenges or tackle their flood risks and vulnerability. This research focuses on urban pluvial flooding (UPF), a topic that is scantly researched in the flood risks literature (Azizi et al., 2022), although it often results in heavy property damage and loss of life as well as interrupts residents’ everyday activities (Azizi et al., 2023; Falconer et al., 2009; Kossin et al., 2017). In low-income neighborhoods of the United States, characterized by aging and deplorable drainage infrastructure that lack the capacity to convey the stormwater generated by more extreme rainfall, the challenge of UPF is much greater (U.S. Global Change Research Program, 2018). Through community-engaged research, this study combined engineering modeling of UPF with participatory action research (Azizi et al., 2023) to unravel the complex socio-environmental dynamics of UPF and simultaneously identify appropriate strategies to address this challenge in the low-income community of South Memphis, Tennessee. It involves working with community-based organizations and residents through a collective, iterative learning process to understand residents’ experiences with and suggestions to confront the challenges of UPF in South Memphis. Through community-engaged research, this study emphasizes a need for researchers from various disciplines to collaborate closely with each other and with residents, community-based organizations, decision-makers, water professionals, etc. in data collection, analysis, and the conceptualization of UPF interventions. It demonstrates how such a process provides an avenue to generate new scientific knowledge of UPF and develop context and place-specific, socially relevant, and multi-beneficial interventions to tackle UPF.

Citations


Key Words: Urban Pluvial Flooding, Community-Engaged Research, Community Engagement, Resilience
While the Texas coast is growing as a major gateway to international and domestic maritime commerce, Texas coastal communities have historically faced multiple hazards from flooding, air, and water pollution, rising sea levels, and tropical storms (Kinzer et al., 2021). The growing industrial activities and a lack of comprehensive data and policy measures to mitigate hazardous events have intensified their threats (N. Lam et al., 2016).

Observing the lack of comprehensive data to combat multi-hazards and the contestation of multiple claims for coastal resources between smaller versus prominent entities, we examine how the most vulnerable communities are enabled or undermined to participate in safeguarding against multi-hazards. This article argues that, due to the dynamic and intricate nature of coastal areas, meaningful participation of all residents is essential, and the co-production of knowledge can help in creating a holistic understanding of these complex coastal areas. To study this dynamic between coastal communities, grassroots organizations, governing entities, and other stakeholders of the coastal commons, we raise the following questions:

What participation structures enable or undermine the co-production of knowledge within the coastal communities?

How can co-production of knowledge help to address multi-hazard concerns and develop a holistic, integrated understanding of the complex coastal systems?

To answer these questions, we utilize Miraftab’s (2004) invited and invented spaces of participation to study the relationship that exists between the planning institutions and the communities around La Quinta Channel in Corpus Christi, Texas. Firstly, we use geographic information systems (GIS) to study the geographic stratification of land use planning on coastal communities. Secondly, we use content analysis to analyze the participation procedures in the empirical data collected from advocacy organizations, focus group discussions involving stakeholders, community workshops, and secondary data from governing entities and nonprofit organizations. Considering La Quinta Channel as a coastal common (Armitage et al., 2017), we hypothesize that as the communities around it draw on socio-ecological system-based thinking, they are developing transformative ways to protect their shared resource. However, analyzing the knowledge shared and produced at different spaces of participation, the agencies in power, and how community knowledge moves between these spaces, we find that these coastal communities are faced with the core issue of democratic accountability in coastal hazard policies. Even though local community groups are strengthening their capacity to voice their challenges, the formal participatory structures are unwilling to develop a co-production framework to combat multi-hazards in the region. Our research findings support Arnstein’s claim that CBOs, non-profit organizations, and grassroots movements prioritize high levels of citizen involvement that grant power, delegation, and control to the people, while local governments tend to prioritize lower levels of participation, which include manipulation, therapy, and tokenism (1969).

Our research highlights the importance of participatory approaches and co-production of knowledge for creating more resilient and sustainable communities, particularly in coastal areas where multi-hazard concerns are prevalent. Co-production of knowledge can help develop a holistic, integrated understanding of the complex coastal systems by incorporating both local knowledge and expert knowledge. This can lead to more informed decision-making, adaptive management strategies, and sustainable development practices that consider
environmental, social, and economic dimensions.

Citations

  https://doi.org/10.1061/(ASCE)NH.1527-6996.0000193

Key Words: Public Participation, Coastal Commons, Co-producing knowledge

PERSPECTIVES ON INNOVATIVE APPROACHES IN AGRICULTURE TO MANAGING WATER SCARCITY

Abstract ID: 815

Individual Paper

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Water planning and governance strategies must adapt to challenges associated with population growth, drought, and projected water shortages (World Economic Forum, 2014). Many emerging solutions to water shortage have focused on recycling and efficiency of municipal supplies (USEPA, 2020). However, the impact of such schemes may have a small impact on overall water use. Water withdrawals for public supply amounted to less than 14% of the United States (US) total in 2015, while agricultural and industrial uses accounted for the biggest withdrawals. In the Western US, agriculture is the dominant water user (Dieter et al., 2018). Farmers are being asked to conserve or share their water with other uses to reduce demand considering an increasingly scarce water supply, but legal, social and cultural barriers can make these actions difficult to pursue without risk of losing water rights and threats to livelihoods and rural communities (Taylor et al., 2019). Reducing irrigation demand can benefit all water users, reducing projected irrigation water shortages for irrigators and increasing the amount of water available to meet other demands (Ward et al., 2008).

Managing scarce water supplies at the local level often involves creative solutions, many of which are not well documented. Since agricultural water use dominates in the Western US, it is critical to understand ideas to manage scarce water resources from the perspective of farmers and those who work with them. For this paper we ask: How are agricultural water users managing long term drought in the Middle Rio Grande basin? What actions do they want to take, and what actions do they feel unable to take?

To answer our questions, we interviewed farmers, decision makers, and non-profit leaders influencing agricultural water governance in the Middle Rio Grande basin of central New Mexico. Interviews explored agricultural water users’ lived experiences with water governance and opportunities to manage water scarcity. We conducted 39 diverse interviews (19 with agricultural water users and 20 with influencers/decision makers). Semi-structured interviews were 30-90 minutes in duration and occurred on condition of anonymity since topics of water use can be sensitive. Interviews were digitally recorded, transcribed, and coded using HyperRESEARCH software to organize and analyze interview data.
Interview results showed that decreasing water supplies in New Mexico are impacting farmers’ crop choices, preferred irrigation methods, and ability to pursue innovative actions. Water users described a desire for:

Greater control of when water is delivered and applied to crops, more efficient irrigation equipment, shifting all or part of their water supply from surface water to groundwater, planting different crops, and improvements to soil health.

A lack of access to capital and cost-share programs generally hindered the ability to pursue these innovations, while access to these financial supports enabled some participants to take these actions. Interviewees discussed need for new programs to allow for more predictable water scheduling; those with wells were better able to control water scheduling and/or convert to efficient irrigation methods. Some farmers without wells expressed a desire for them or for on-farm water storage to enable adoption of more efficient irrigation infrastructure and/or changing crops. Others described how fear – of change, or of losing their water right – may lead producers to continue using historic irrigation practices. A lack of knowledge and experience with new methods also limits participants’ ability to pursue these actions; however, information sharing between farmers served to build trust and increased the probability that a farmer would take on the perceived risk to implement an innovation. The results of this paper will be useful to the state of New Mexico and other places with similar water governance structures and water scarcity challenges.

Citations


Key Words: agricultural water use, conservation, efficiency, climate change, drought
has some limitations, such as the inability to accurately reflect the utilisation of regional natural resources, which affects the accuracy of the ecological footprint assessment. Therefore, the improved ecological footprint model has been developed to overcome these shortcomings and provide a more accurate evaluation of ecological sustainability.

Methods: This paper takes Lushan County, an ecologically sensitive mountain town, as an example and uses the improved ecological footprint model to analyse the ecological sustainability of Lushan County in the past ten years. The ecological footprint of Lushan County is evaluated using four elements of ecological pressure, ecological sustainability, ecological occupation, and ecological economic coordination.

Results: The results show that from 2009 to 2022, the per capita ecological footprint of Lushan County decreased by 39%, and the ecological carrying capacity decreased by 14%. However, Lushan County is still in an ecological deficit, and ecological unsustainability is gradually increasing. Among the six types of land, only forest land is in a state of ecological surplus, and the rest is in an ecological deficit state. It indicates that most of the ecologically productive land in Lushan County is in an unsustainable form of development. From the perspective of ecological sustainability evaluation, the ecological sustainability of Lushan County is still very poor. Although its ecological pressure is decreasing, it is still very high, and the degree of ecological unsustainability is increasing.

Conclusion: In the future, Lushan County should realise the region’s sustainable development by reducing the ecological footprint and improving the ecological carrying capacity. Lushan County needs to balance economic growth and environmental protection, promote the rational use of natural resources, and actively develop green industries. The government should strengthen ecological management and protect ecologically sensitive areas, such as forests, wetlands, and rivers, to ensure the region’s sustainable development.

Citations


Key Words: ecological footprint, sustainable development, sustainable development evaluation, Lushan County
increasing the recycling rate to 50% by 2030, compared to about 32% at present (Environmental Protection Agency [EPA], 2020). The National Recycling Strategy, later released in alignment with the Goal, explicitly advocates for identifying “strategic objectives and stakeholder-led actions to create a stronger, more resilient, and cost-effective” recycling system (EPA, 2021). As MWM is largely the responsibility of local and regional governments, “strategic objectives” and “cost-effective” actions need to be supported by region-specific analyses. Regional characteristics not only involve market and sociodemographic dynamics, but also the inventory data, goals, and metrics of MWM, which planners have an important role to play in.

At present, the primary approach to measuring the “effectiveness” of MWM nationwide is recycling rate, measured by material volume or weight diverted from landfills. The “strategy objectives,” in contrast, vary greatly by region, if formally developed at all. This study reveals that simply focusing on increasing recycling rate does not necessarily optimize the environmental or economic outcome. Essentially, the decision on the priority of recycling programs (i.e., which materials to focus on to achieve the 50% recycling goal under financial and infrastructure constraints) can largely depend on the “strategic objectives,” or the goals and metrics to start with.

This study adopts a system-approach and provides some data-informed examples on how sustainability goals and metrics can align MWM goals and objectives with local and regional characteristics. This research includes two major components. The first step aims to develop a taxonomy of MWM goals and metrics that cover the spectrum of sustainability challenges. Besides the commonly adopted three pillars, or 3E principles of sustainability, this research also discusses the oft-overlooked impacts from cross-media (e.g., air, water, and land) pollution migration associated with MWM and market dynamics at multiple geographic scales. Corresponding metrics for MWM priority setting and effectiveness analysis will be explored. The second step draws upon multidisciplinary literature and involves an empirical analysis of those metrics that can be supported by publicly available data and tools, such as life cycle impacts of materials, greenhouse gas (GHG) emissions, job creation opportunities, revenue from the secondary market of recycled materials, and direct and total economic impacts on the regional economy. Discussions are provided in the end about planning strategies that may address the confounding factors and help close the gap between theoretical research and practice.

Citations


Key Words: Material and Waste Management, Strategic Planning, Recycling, Sustainability Metrics

GREEN SPACES FOR WHOM? A LATENT PROFILE ANALYSIS OF PARK-RICH OR -DEPRIVED NEIGHBORHOODS IN NEW YORK CITY
Abstract ID: 854
Individual Paper

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Disparities in green space provision and distribution across different socio-economic groups have become a growing concern globally. Scholars and practitioners have pointed out that higher socioeconomic status neighborhoods not only have better proximity to urban parks and green amenities, but also tend to have larger and higher quality spaces than those in low socioeconomic groups. However, it is important to note that not all parks and green spaces are equally designed nor have uniform outcomes on certain social groups and locations; instead, a complex set of factors defines their distribitional justice in different socioeconomic and geographical contexts (Anguelovski et al., 2018; Rigolon & Németh, 2020; Wolch et al., 2014).

The research questions of this study are thus: In what types of neighborhoods are green spaces—especially parks—either concentrated or sparsely distributed in New York City? What are the patterns and drivers of differentiation among each neighborhood typology? To classify neighborhoods into different typologies, this study employs a latent profile analysis based on different combinations of multiple, diverse explanatory factors related to their socioeconomic characteristics and green space provision indices. The primary datasets used in this study are 1) maps and records of New York City’s parks properties obtained from the Planning and Development Division of the New York City Department of Parks and Recreation, and 2) demographic and socioeconomic data in New York City from the 2000 U.S. Census and the American Community Survey 2015-2019 five-year estimates at the census tract level.

The findings and methodology of this study can inform policymakers and urban planners to establish context-sensitive solutions for urban greening or green space planning that better balance the needs of diverse neighborhoods, and ultimately allocate resources in a more equitable and sustainable way.

Citations


Key Words: Urban green space, Urban parks, Environmental justice, Latent profile analysis, Neighborhood typology

CLIMATE CHANGE AND RESIDENTIAL DISPLACEMENT IN COASTAL CALIFORNIA: HOW AND WHY ARE LOW-INCOME HOUSEHOLDS AT RISK?

Abstract ID: 868
Individual Paper

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Low-income households in U.S. coastal areas have experienced, or may soon face, displacement from a combination of economic and environmental factors. Common environmental pressures include sea level rise, flooding, coastal erosion, and wildfires. Direct and indirect mechanisms connect vulnerable households with potential displacement due to climate change. This has been termed “climate gentrification” and can occur at multiple scales, from the parcel to the metropolitan area (Keenan et al., 2018).

Residents of Santa Cruz County (California) are experiencing deepening housing unaffordability and climate pressures. While the area was relatively affordable in the 1970s and 1980s, by 2019 nearly 52% of renters lived in
housing that was unaffordable to them and 32% were extremely cost-burdened. The typical home value was over $1.5 million in 2022, an increase of about 33% from the previous year. There are a handful of relatively less expensive neighborhoods, some of which are prone to flooding or wildfires.

Our study focuses on coastal neighborhoods at the intersection of flood risk and social vulnerability. Three of the county’s four census tracts at greatest risk of inundation are clustered along the San Lorenzo River, including downtown Santa Cruz and the Beach Flats. These three tracts are our study area. The First Street Foundation estimates that 33% of residential properties in the study area have at least an 80% chance of flooding in the next 30 years. UC Berkeley’s Urban Displacement Project identifies these three tracts as susceptible to displacement.

Our three research questions examine the potential for residential displacement, with a particular interest in mechanisms related to climate change. First, what housing types, tenures, and vintages are disproportionately located in flood hazard areas and why? How do flood risk and other environmental factors affect household decisions about adapting or moving? Do housing development trends indicate “climate gentrification,” and if so, what are the mechanisms?

We employ a mixed-methods case study approach. First, we use census data to characterize the study area and compare it with other parts of the county. Second, we use assessor parcel data to identify and analyze the convergence of lower-cost housing types and climate hazards. Third, we survey residents to better understand current housing affordability issues and perceptions of, and experience with, flooding. Fourth, we interview planners, policymakers, and housing developers to identify factors that affect development in the study area.

Our preliminary analysis indicates two main findings. First, there are statistically significant differences between the study area and other county tracts. The study area has a lower average household income ($50,271 vs. $90,863), higher renter share (69% vs 36%), higher multifamily renter share (53% vs. 16%), and greater population share at high risk of flooding (41% vs. 3%). Second, lower cost housing types in the study area are disproportionately located and being built in Special Flood Hazard Areas (SFHA), areas with a minimum one-percent annual chance of flooding. Nearly two-thirds of housing in the SFHA is attached multifamily housing, as is one of two mobile home parks. Additionally, more than 57% of study area housing units built between 2000 and 2020 were located in the SFHA. Of these new units in the SFHA, about 60% are multifamily rental and 33% are attached owner (e.g. townhomes, condominiums).

This research is important to both scholars and practitioners. For scholars, we develop a western U.S. case study to extend existing climate gentrification research, which has been primarily focused on the eastern U.S (Best et al., 2023; Keenan et al., 2018). For practitioners, our research can inform decisions about residential growth in the context of climate hazards, and bolster policies that reduce displacement risk for low-income households.

Citations

Community comprehensive plans are an expression of community intention concerning land use. In them are typically acknowledgments of current conditions, goals a community wants to achieve, and policies to support that achievement. Plans guide planning-related decisions until changes in conditions, goals, and/or policies necessitate a new plan. The plan evaluation literature has a well-established framework to guide what should be in a “good” plan including a fact base; goals and objectives; policies, strategies, and tools; interorganizational coordination; and capabilities and implementation (Berke & Godschalk, 2009). These have formed the foundation of plan evaluations focused on diverse issues including sustainability, college campus planning, and affordable housing (e.g., Berke & Conroy, 2000; White, 2014; Gilbert & Gurran, 2018). The majority of these studies provide a cross-sectional assessment, delivering insights into the state of practice at a particular point in time. What, then, is the relationship a new plan has with its predecessors?

Although the plan evaluation literature is extensive, there have been few studies that provide longitudinal insights regarding plan quality progression. Longitudinal plan evaluation studies are opportunities to learn from previous planning efforts, providing practitioners insights from assessing the impact of prior policies on existing outcomes (Brody, 2003; Stevens & Senbel, 2017). Brody (2003) first called for a longitudinal approach to assess adaptive learning of the hazard mitigation components from 60 comprehensive plans in Florida and Washington in 1999, compared to a 1991 study of those same plans. The analysis highlighted improved scores in the later plans, indicating policy learning had taken place. Stevens and Senbel (2017) assessed climate change considerations in 39 British Columbia municipal plans, originally the focus of a 2014 study. The authors found that while the “mean total plan score did not improve over time...[there were] significant improvements in both the fact base and implementation principles” (Stevens & Senbel, 2017, p. 6). A third study by Lukasiewicz et al. (2020) examined thirty regional environmental plans in Queensland, Australia in three temporal sets over a thirteen-year period. They found that “the quality of NRM planning has fallen since it was introduced in the early 2000s” (Lukasiewicz et al., 2020, p. 13).

There have been only three longitudinal plan evaluation studies since 2003 and the outcomes were inconsistent, highlighting both gains and losses in scores. The longitudinal studies addressed natural hazards, climate change, and resource management issues which are important elements of planning for sustainable development, though more specialized than comprehensive. Existing research has demonstrated little internalization of sustainability concepts in planning practice as evidenced in plan policies (e.g., Berke & Conroy, 2000; Conroy 2006). Results of a longitudinal assessment of the updated plans from the Berke and Conroy study (conditionally accepted for publication) indicate not much has changed in twenty years. This study attempts to address the inconsistencies by revisiting locations of the first plan evaluation study focused on sustainable development by Berke and Conroy (2000).

Two research questions guide this work:

How do planners use prior plans to inform the planning process for new plans?
What is the relationship between the role of prior plans to changes in plan sustainability scores? To address these questions, I survey planners in 28 communities whose plans were the target of the Berke and Conroy (2000) study on plan sustainability. The survey provides insights regarding the role previous plans play when developing updated plans. I then use those insights to examine the relationship between changes in plan sustainability scores and the reported role of previous plans. This study is important for planning educators and practitioners to understand the role reflection, learning, and adaptation play in plan-making.

Citations


Key Words: plan evaluation, sustainable development, plan learning, planning process
Three scenarios of suitability analysis are identified by the GIS model including suitable for living shorelines (LS), suitable for hybrid solutions (HS), and not suitable for living shorelines (NLS) through a scale with assigned values of 3, 2, and 1 respectively. The GIS spatial data input includes shapefiles and raster data set on “elevation/slope, bathymetry (contours), topography, bank height, storm surge and wind energy, marsh, beach, structures, and submerged aquatic vegetation (sav) presence, erosion level, tree canopy, threatened and endangered species, wetlands, and current shoreline type”. The weighting method includes assessing each parameter separately and later assigning a weighting method based on percentage calculation derived from LSFM. All GIS raster data was converted into 10m x 10m cell size and analyzed using the “Suitability Modeler” in ArcGIS Pro 3.1.0. Ultimately, this project will demonstrate the thorough integration of shoreline and upland data through mosaic and overlay analysis and will identify the most suitable sites for the installation of living shorelines at APG.

Citations


Key Words: Suitability Analysis, Living Shorelines, Nature-Based Solutions, Coastal Resiliency, Aberdeen Proving Ground

ASSESSING INFORMATION IN JOINT FACT- FINDING EFFORTS: REVISITING SALIENCY, CREDIBILITY, AND LEGITIMACY

Abstract ID: 933
Individual Paper

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Many of our most pressing planning and public policy challenges, particularly in the environmental domain, are scientifically and technically complex. Decision makers, key rights holders, and other stakeholders frequently claim that they wish to use the ‘best available science’, yet scientific and technical information all too often becomes politicized and weaponized. Joint fact-finding (JFF) approaches can help groups to engage in shared learning to improve decision-making and avoid or at least narrow disagreement around the factual dimensions of the issues they are grappling with (Matsuura & Schenk, 2017).

An important and underexplored element of JFF is the criteria against which groups collectively evaluate the information their processes generate and use. Cash et al. (2002) proposed saliency (i.e., relevance to the issue),
credibility (i.e., meeting of scientific standards), and legitimacy (i.e., the process itself is seen to be fair, accounting for parties’ different values, interests, and so on) as key criteria. These criteria are widely used (see, for example, Matson et al., 2016 and van Voorn et al. 2016). However, there is little research explicitly assessing their appropriateness in practice. It is not clear that participants in JFF efforts would naturally frame how they evaluate information products in the same way.

This paper revisits saliency, credibility, and legitimacy and provides an empirically-grounded and updated perspective on how participants involved in a JFF effort assess scientific and technical information. The JFF process examined is a complex multi-stakeholder effort tackling the issue of freshwater salinization in the Occoquan Reservoir in northern Virginia, which serves as the drinking water supply for almost one million people. Stakeholders and researchers engage through the Executive Committee for the Occoquan System (ECOS), which meets quarterly and involves intermittent interactions between meetings. In the spirit of JFF, a core dimension of ECOS’s work is discussing research iteratively as agendas are formed, research is conducted and preliminary findings are generated, and participants seek to make sense of those findings, including their implications on system management (Grant et al., 2022).

The methodology employed with ECOS members to better understand how they assess information products generated through this process has three steps:

First, before an ECOS meeting, they are being asked the following questions through an open-ended questionnaire: (1) What is the single most important consideration as we deliberate around the management of sodium ions in the Occoquan system? (2) When presented with data or information on sodium ion concentrations in the Occoquan, how do you evaluate it?

At the ECOS meeting, they will be presented and have opportunities to discuss two data products generated by researchers in response to earlier information requests: an analysis of the concentration of salt ions in the Occoquan relative to other waterways across Virginia, and a sodium ion concentration model of the system.

After the meeting, they will be asked to reflect through a follow-up questionnaire that asks: (1) Did you find the data presented useful for our decision-making on the Occoquan? Why or why not? (2) Did the data presented seem to meet scientific standards and to be technically sound to you? Why or why not? (3) Did the process followed to develop and present the data seem fair to you? (4) What could have made the data presented more useful, technically robust, and/or fair from your perspective?

Questionnaire responses will be coded for analysis, paying particular attention to how the ways in which they talk about assessing project research products supports, contradicts, and adds to the criteria of saliency, credibility, and legitimacy. The results of this research can help us to improve both the practice and assessment of our JFF efforts.

Citations

WHAT’S IN A PLAN? A TEXTUAL ANALYSIS OF COMMUNITY RESILIENCE AND CLIMATE ACTION PLANS IN NEW YORK CITY

Abstract ID: 957
Individual Paper

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Climate action literature has called for greater coordination among city agencies in urban climate resiliency planning. The threat of climate change requires new infrastructure to maintain the habitability of many metropolitan areas worldwide. Urban infrastructure is capital intensive, subject to budget constraints and various regulatory oversight. While many cities are eager to take initiatives, there is a lack of coherent review and coordination of competing priorities. New York City, home to 8.5 million people, epitomizes these challenges. Multiple agencies outside of the designated Department of City Planning and the Mayor’s Office of Climate and Environmental Justice speak indirectly to climate resilience. While the literature on inter-city variations in community resilience and climate priorities is rapidly growing, more needs to focus on neighborhood-level variations. Disadvantaged communities have historically been excluded from planning processes; as the threats of climate change loom large, understanding differences between communities is key to understanding the differential climate risks they face. New York City, with its diversity of planning processes and agencies, offers an interesting site to explore these dynamics.

Interest in this theme emerged from a Summer School conducted by the Northeastern Regional Science Association. This paper reports on the first of a multi-stage project that aims to reconcile the climate action priorities of different stakeholder groups. This step is motivated by two questions: firstly, what are the differences in the priorities for climate action and resilience advanced by different plans; secondly, how are these priorities spatially and socioeconomically distributed? We use a text-based analysis to review climate resilience plans across multiple agencies to categorize plans by priorities and spatial scope.

Plan data for this paper is drawn from the directory of New York City agencies and cross-referenced with the City Environmental Quality Review (CEQR) database by the Mayor’s Office of Environmental Coordination to identify their approval status. The plans identified operate at different spatial scales from the local, neighborhood level, to burrough-level, to the city-scale. Plans are subset to identify those that meet at least one of multiple, pre-determined climate resilience criteria at any spatial scale. We use a combination of textual analysis and GIS techniques to examine shortlisted plans. Text mining and analysis have only been marginally used in urban planning, primarily to explore real estate listings and neighborhood change. In this study, we use the Lbl2Vec algorithm for unsupervised retrieval and classification of documents, based on which broad categories are constructed based on the frequency of occurrence of keywords/themes. The corresponding categorizations are correlated with underlying neighborhood-level characteristics using GIS techniques to analyze the spatial distribution of climate resilience priorities.

This paper makes two main contributions: Firstly, it attempts to understand neighborhood-level variations in
climate resilience, which helps shed light on how different communities prioritize different types of climate action in NYC. Secondly, it demonstrates a use case for text analysis in urban planning and makes a case for expanding the use of this tool for future research.

Citations


Key Words: Climate resilience, Flood risk, Text analysis

SMART LAND USE PLANNING CAN MITIGATE CLIMATE CHANGE EFFECTS ON HABS IN LAKE MAUMEE WATERSHED

Abstract ID: 978

Individual Paper

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Climate change contributes to the elevated level of nutrients, which is likely an important reason for the growth of harmful algal blooms (HABs) in the Great Lakes Region. HABs can severely degrade aquatic ecosystems and threaten human health. Existing research has shown that eutrophication is one of the primary drivers of HABs, which is caused by the accumulation of nutrients in lake water from point and non-point source pollutions. Climate change may directly or indirectly accelerate lake eutrophication with rising temperature, increasing precipitation, changing carbon cycles and water stratification.

The combined and synergistic effects of land use/land cover (LULC) and climate change on water quality have been extensively studied in many watersheds globally. For example, numerous studies have shown a negative correlation between climate change and in-stream nutrient loading. They also demonstrated that climate change magnified the existing impacts of LULC on water quality. However, there is limited research exploring the combined and synergistic effects of LULC and climate change on HABs through the change of nutrient levels. Specifically, important research gaps in this field include: (1) the prediction of HABs with a physical hydrological model under climate change; (2) LULC scenarios are not well connected to urban planning policy and watershed protection plan.

From the interdisciplinary perspective between hydrology and urban planning, we investigated the predicted effects of climate change on HABs under different LULC scenarios. We chose Lake Maumee watershed as our study site, which is located upstream of Lake Erie, which has the highest nutrient loading and the most severe HABs issues among the Great Lakes. Our research questions included: (1) Can a physical hydrological model (Soil & Water Assessment Tool Plus, SWAT+) coupled with remote sensing-based bloom detection yield satisfactory predictive performance of HABs? (2) How will future climate change scenarios affect HABs? (3) What kind of LULC plans could effectively mitigate climate change effects on HABs? Specifically, does developing agricultural, industrial, and residential land uses away from environmentally sensitive areas lead to lower HABs level under
climate change compared to the conventional LULC scenarios?

To build the predictive model of HABs from climate and LULC variables, we used SWAT+ to establish the connection between watershed LULC, climate, and stream nutrient levels (total phosphorus and soluble reactive phosphorus in particular) and used statistical models to project nutrient level to HABs detected from remote sensing imagery. After the coupled hydrological and statistical model was built, we used it to predict HABs under future climate change and LULC scenarios. We developed novel LULC scenarios of different land use types relevant to environmentally sensitive areas such as headwater streams, riparian zones, and wetland. Specifically, we created scenarios with various distances between agricultural, residential, industrial areas and environmentally sensitive areas. We also considered involving the application of various Best Management Practices (BMPs) and watershed protection plans at different locations in the scenario development.

We concluded that the locations of land use types relevant to environmentally sensitive areas and the adoption of BMPs and watershed protection plan influenced climate change effects on HABs. Therefore, more reasonable land use planning could mitigate the adverse effects of climate change on aquatic environments. Specifically, when agricultural areas and residential areas were planned less than 2 km from the headwater stream, it led to accelerated eutrophication and the associated HABs. Also, different BMPs have varying effects on HABs, with BMPs closer to stream segments more effective. This research showed promising evidence of proposing reasonable land use policy and watershed protection plans to mitigate climate change effects on HABs. And this research also demonstrated that reasonable land use policies can benefit human health and social equity.

Citations


Key Words: Climate change, HABs, LULC, Scenario prediction, SWAT+

INVESTIGATING THE DIFFERENCES BETWEEN SUBJECTIVE ENVIRONMENTAL PERCEPTION AND OBJECTIVE ENVIRONMENTAL QUALITY OF RIPARIAN ZONE: A STUDY IN THE HURON RIVER, MICHIGAN
Abstract ID: 993
Blue space and green space promote both physical and mental health by regulating and supporting ecosystem services that benefit the ecology and cultural services people rely on. Riparian zones, as an important part of blue space and green space, are lands along the edges of water bodies. Many waterfront parks were developed around riparian zones, which play a significant role in connecting people with nature.

Previous research has studied people's perceptions of the riparian zone and discovered the difference between the subjective perception of water and/or riparian zone and the objective environmental quality. For example, it was found that both environmental factors and sociocultural factors affected people's perception of aquatic ecosystems. Also, public's perception of water quality was often different from the measured water quality because of various factors contributing to how individuals or groups perceived the aquatic environment. However, several gaps were associated with existing studies. First, the difference between subjective and objective environmental quality has been mentioned in many research but without empirical studies that quantify each subjective and objective factor to investigate the difference. Second, stream water quality and riparian zone quality was rarely considered related when studying people's perception of waterfront parks. Third, previous research has not systematically studied how the characteristics of water use activities (e.g., type, duration, frequency, etc.) affect perception.

We raised the following research questions to compensate for the gaps: (1) Can people's subjective perception of water quality and riparian quality accurately reflect objective water quality and riparian quality measured by environmental indices? (2) What is the relationship between people's perception of water quality and their perception of riparian quality? (3) What social demographics, water-related recreational activities, and environmental characteristics contribute to the potential overestimation or underestimation of water quality and riparian quality?

To answer these questions, we conducted a field study in 16 waterfront parks along the Huron River, Michigan. We framed the riparian zone quality as the combination of water quality and riparian quality. For objective water quality indices, we used instruments to sample total suspended solids, dissolved oxygen, nitrate, and water temperature. For objective riparian quality indices, we used a similar method as previous research that included Qualitat del Bosc de Ribera (QBR) Index, Normalized Difference Vegetation Index (NDVI), and Riparian Strip Quality Index (RSQI). For people's subjective perception of water quality and riparian quality, we designed and conducted a face-to-face survey involving ~500 visitors in the waterfront parks. Our survey allowed people to answer questions in the riparian environment to reduce the biased compared to previous studies using mail or online survey. Chi-Square was used to inspect the relationship between subjective and objective environmental quality in the riparian zone. Logistic regression was then used to analyze the effect of how water uses behavior, parks’ characteristics, and visitors’ socioeconomic status affected the difference between subjective environmental perception and objective environmental quality.

We found that subjective perception can reflect the objective environmental quality measured by objective indices. However, the perception of environmental quality may be inaccurately influenced by factors such as the frequency of water use and visitors’ socioeconomic characteristics. Also, the perception of water quality is positively correlated with the perception of riparian quality. Our findings provided inspiration for environmental education by indicating that people’s participation in the riparian zone water use could increase their awareness of environmental quality and potentially reduce the risk of waterborne diseases. In addition, a large amount of
original survey data could benefit the environmental governance in the Huron River watershed to regulate recreational activities.

Citations


Key Words: Water quality, Perception, Recreational Use, Riparian zone, Urban Stream

PROLONGED WATER WOES OF MUMBAI’S MITHI URBAN RIVER: WHAT ARE DECISION-MAKERS MISSING?
Abstract ID: 1006
Individual Paper

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The Mithi River in Mumbai is a critical breathing lung of the city -- regulates runoff through the wet and dry seasons, particularly during extreme monsoon spells. All while traversing through the densely populated development, culminating into the Sea. This research deep dives into the case of the polluted Mithi River, which gained traction only after the devastating deluge of 2005, breaking down all infrastructure systems, baring the gravity of pollution and urban flooding, expected to exacerbate further the impact of climate change on this coastal city. Furthermore, this river is a lens to unfold layers of a divided and highly contested human-dominated urban ecosystem of Mumbai city.

In response, for the past seventeen-plus years, the public authorities have focused on the river widening, training, and cleanup of the river body along with slum clearance and relocation of industries along the riverbeds. However, a critical look into the city's environmental history will reveal that other pro-development projects also contributed to river pollution and compromised the ecological integrity of the urban river stream in a highly contested urban ecosystem. Like the extensive land reclamation since the 1970s to develop the present-day financial district of Bandra Kurla Complex (BKC) and the Mithi river diversion to accommodate an airport runway creating a significant choke point and jeopardizing the ecological integrity of the rivers that perform as critical urban drains. There have been no evident mechanisms to address these developments and interventions that challenge Mumbai’s flood-prone climate future. Myriad interventions are incessantly underway to “save,” “revive,” “restore,” and “reimagine” these urban rivers, but fundamentally the condition of these rivers stays unimproved. Most of the responses fall under the realm of either displacement or large-scale design and hard-engineering solutions, posing an evident challenge for inclusive planning. This study also aims to look at how a representative decision-making community can begin to address these issues in planning inclusiveness through multi-scalar behavioral driven interventions reaching all members of the society, including the most vulnerable, through strategies like service delivery and education.

Like many developing cities of the global South, the challenging state of Mumbai’s rivers is a barometer of an
urban crisis. Several misplaced priorities become evident while analyzing informant responses from the decision-making community and archival study. So, what are we missing here? This study explores behavioral opportunities and interventions by engaging a diverse decision-making community (n=30). Furthermore, it seeks to understand the environmental history of the Mithi, identify sites of multiple failures, and evaluate the efforts to manage and improve its conditions. Techniques like incentivizing positive behavior of communities, businesses, or institutions, establishing a social support network to reinforce pro-environmental behavior, and recruiting change agents or role models within our communities come to the forefront. If recognized and scaled appropriately, these approaches could be instrumental in crafting environmental policies, programs, and significant infrastructure projects toward inclusive practices. The data was collected from 7-month fieldwork completed in 2022 and archival material.

Along these lines, the primary research question is two-fold:

(1) What does an urban environmental history of these rivers reveal regarding factors responsible for river pollution, and how does it align with current pollution abatement and restoration efforts?

(2) How do human-centric approaches through a behavioral perspective help decision-makers in urban water management better intervene in strained ecosystems?

The context’s theoretical framework and case study analysis delve into the Socio-Ecological Systems approach and methodologically build on the Pro-environment Behavior in complex ecosystems to understand the place-based governance challenges and opportunities through the perspective of the decision-making community.

Citations


Key Words: Mumbai, Mithi river, urban water management, environmental behavior, decision-making community

ADVANCING EQUITABLE PARTNERSHIPS: FRONTLINE COMMUNITY VISIONS FOR COASTAL RESILIENCY
KNOWLEDGE CO-PRODUCTION, SOCIAL COHESION, AND ENVIRONMENTAL JUSTICE
Abstract ID: 1019
Individual Paper

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Community-based organizations (CBOs) in frontline coastal communities grapple with social and environmental injustices compounded by climate change risks. In response, CBOs have developed deep expertise in climate adaptation tailored to their local communities. Yet these groups are often effectively excluded from resilience planning processes that are top-down, and involve perfunctory and often performative consultations. This paper asks: What do community leaders seek from adaptation planning, and how do they recommend such processes be improved?

Drawing on the experiences of ten CBOs in coastal New York and New Jersey, the majority representing BIPOC environmental justice communities, this article advances community-driven priorities for coastal resilience planning outcomes and processes. We conducted structured 60-90-minute interviews with ten CBO leaders between February-March 2022, collaboratively completed an iterative content analysis of the interview data and community plans, and workedshopped core findings in multiple sessions and conversations with participating CBOs.

CBO leaders had consensus on resilience planning priorities: they oppose top-down approaches where planners bring a predetermined agenda, and seek true partnership through a relational approach that values grassroots perspectives to co-produce equitable and just strategies to address climate risk. Recommendations for decision-makers center on the need to build on existing community-led plans, resource community capacity for empowerment in planning processes, act with transparency to foster trust, partnership and co-planning with communities, and self-evaluate their own practice. Lessons for researchers seeking to support community empowerment in resilience planning include the need to establish lasting and mutually supportive relationships with community partners to enable knowledge co-production.

Citations


Key Words: adaptation planning, climate knowledge, co-production, environmental justice, resilience/cohesion

PLANNING FOR COMMUNITIES IN MULTI-HAZARD RISK ENVIRONMENTS

Addressing multi-hazard risks has been an area of growing focus in planning for hazards and disasters. For many communities, living with multi-hazard risks means managing the ongoing impacts of hazard and disaster risks,
while simultaneously dealing with increasing environmental threats to health and safety. Moreover, these issues are further magnified when considering the additional complexities brought on by broader social vulnerabilities and legacies of systematic inequalities. However, despite the growing awareness of the interrelated nature of hazard risks, questions remain as to how the management of multiple risk considerations unfolds in practice (Finzi et al., 2021; Pescaroli & Alexander, 2018; Tozier de la Poterie et al., 2021) Thus, as part of efforts toward addressing these gaps, it becomes important to explore how planning approaches are working to address the wide variety of risks impacting vulnerable communities.

The case study of Los Angeles County presents a useful case for exploring planning and policy approaches toward multi-hazard risks. The Los Angeles area is impacted by a number of risks, including hazard and disaster risks (i.e., earthquakes, flooding, wildfires), environmental risks (i.e., air pollution, water access), and socio-demographic vulnerabilities (i.e., income, race/ethnicity, health-related) (Kim, Sun, & Irazábal, 2020). Frequent research has noted the existence of the multitude of risks impacting urban communities in the Los Angeles region. However, much of this work continues to explore these risks individually, despite the frequent discussions of the importance of considering risks and vulnerabilities simultaneously.

Furthermore, while these issues may broadly speaking have effects across Los Angeles County, similar to many other contexts, hazard risks are not evenly distributed across all communities in the region. As scholars frequently note, some parts of the region are at higher exposure to the potentially problematic ways individual risks may work together to create more significant disasters. This issue is further exacerbated when considering the role social-demographic inequalities play, as the communities that are highly vulnerable to intersecting environmental and social risks are the same communities that are frequently left out of the planning and decision-making processes (Wisner, 2009). For these reasons, it becomes crucial to assess the equitability of multi-hazard planning efforts undertaken by planners and policymakers in the Los Angeles area.

To begin addressing these questions, this study draws on findings from a qualitative assessment of plans, policies, and stakeholder data, to present lessons learned on planning for multi-hazard risks in Los Angeles County. Specifically, this study centers on addressing (1) how multi-hazard risk considerations are incorporated into planning and policymaking in Los Angeles County; (2) how decisions are made regarding risk prioritization and potential relationships amongst risks; and (3) how equity, justice, and social vulnerability considerations are addressed alongside multi-hazard risks. Study findings highlight the current gaps that limit the advancement of integrated multi-hazard risk approaches and detail how planning efforts can be improved to better center equitable intersectional risk frameworks.

Citations


Key Words: multi-hazard risks, intersecting risks, social vulnerability, equity
Community-based organizations (CBOs) in frontline coastal communities grapple with social and environmental injustices compounded by climate change risks. In response, CBOs have developed deep expertise in climate adaptation tailored to their local communities. Yet these groups are often effectively excluded from resilience planning processes that are top-down, and involve perfunctory and often performative consultations. This paper asks: What do community leaders seek from adaptation planning, and how do they recommend such processes be improved? Drawing on the experiences of ten CBOs in coastal New York and New Jersey, the majority representing BIPOC environmental justice communities, this article advances community-driven priorities for coastal resilience planning outcomes and processes. We conducted structured 60-90-minute interviews with ten CBO leaders between February-March 2022, collaboratively completed an iterative content analysis of the interview data and community plans, and workshopped core findings in multiple sessions and conversations with participating CBOs. CBO leaders had consensus on resilience planning priorities: they oppose top-down approaches where planners bring a predetermined agenda, and seek true partnership through a relational approach that values grassroots perspectives to co-produce equitable and just strategies to address climate risk. Recommendations for decision-makers center on the need to build on existing community-led plans, resource community capacity for empowerment in planning processes, act with transparency to foster trust, partnership and co-planning with communities, and self-evaluate their own practice. Lessons for researchers seeking to support community empowerment in resilience planning include the need to establish lasting and mutually supportive relationships with community partners to enable knowledge co-production.

Citations


Key Words: adaptation, resilience, co-production, justice
William Whyte’s (1968) *The Last Landscape* enumerates land conservation tools that are both the foundation of and remain extremely prescient in the current open space protection canon; namely, zoning, differential taxation, fee simple ownership, and conservation easements (CEs). He offers a hypothetical stream valley “on the edge of suburbia, still unspoiled, with most of the land in farms and small estates. The meadows on either side of the stream are a flood plain; and quite properly they have been zoned against development. The rest of the valley is zoned as low-density residential, with minimum lots specified at two acres. There are no subdivisions yet and landowners are still assuring each other that they would not dream of selling out. . . .We have, then, three kinds of land: the flood plain that can be kept open by zoning, the highly developable land that probably cannot be kept open, and the in-between land where there is a fighting chance. Here is where the easements can be most useful. No one landowner has to give up very much . . . only [an easement] on that part of [their property] which falls within the conservation zone along the streams” (80).

As this hypothetical suggests, early policy approaches to the CE instrument created a tool that would supplement land use planning for open space preservation where fee simple purchase was exorbitant or infeasible. This suggests that there are certain kinds of land on which CEs would be expected to manifest, creating a burgeoning research area across multiple disciplines. Recent work in Appalachia showed that CEs are “closer to urban areas and at lower elevations, in areas of greater housing density and median incomes, closer to roads and with greater landscape-level habitat heterogeneity, in areas of greater crop productivity, and farther from protected areas” (Baldwin and Leonard 2015, 12), which may be a combined product of social factors, land use legacy and growth pressure (Lacher et al. 2019).

Early policy also created a legally malleable legal tool that was applicable in multiple settings/types of properties, reflecting a breadth of permissible and socially desired reasons under U.S. regulations and state CE enabling acts (McLaughlin, 2017). Owley and Rissman (2016) examined the changing nature of the CE instrument itself over time, conducting a study of 269 CEs in six states, supplemented by 70 interviews with the land trusts holding them. They found that “CEs initially held a promise of being a straight-forward low-cost alternative to fee-simple acquisition, but are becoming increasingly complex. . . . They are being used more often and in more contexts”(83).

With the import of private land conservation in President Biden’s 30 by 30 plan and as a ballast for land conversion and climate change biome shifts, we need to further understand the evolution in one of the cornerstones of Whyte’s (1968) open space toolkit. To do so, we more extensively (geographically and volumetrically) examined and validated the Owley and Rissman (2016) and Baldwin and Leonard (2015) findings through datasets that we constructed in 12 exurban high growth counties in 6 eco-regionally and geographically representative states around the U.S. In these counties, we used results from a combination of document coding for the 2823 CEs placed between 1997 – 2008/2009, semi-structured interviews with 20 of the 41 land trusts holding these CEs, survey responses for the landowners who placed these CEs (210 respondents, 13.6% response rate), and a measure of the uses on the CE properties (the Human Modification Index score) to statistically and spatially assess the trends in the CE instruments themselves, their locations, and the land uses that they permit over time.

Citations


Key Words: conservation easements, open space preservation, complexity, sprawl

PUBLIC AND ELECTED OFFICIAL PREFERENCES FOR LOW-CARBON AND RENEWABLE ENERGY INFRASTRUCTURE PROJECTS: EVIDENCE FROM PENNSYLVANIA, USA

Modeling efforts have identified various pathways to decarbonize the United States energy system, but there is broad agreement that all will rely on rapid, large-scale deployment of renewable energy technology to meet increased demand for electricity generation while quickly reducing emissions. This transition will require radical technological, industrial, economic, and social shifts relevant to planning practice: all pathways in Princeton’s recent Net Zero America study call for the US energy and industrial system to phase out most coal use by 2030 and significantly reduce oil and natural gas use by 2050 (Larson et al., 2020). This degree of land use change would require sustained political will and community support across local, state, and national levels. While some planning scholarship has addressed issues of land acquisition governance in renewable energy transitions, the issue remains largely understudied among planners (Kennedy & Qayyum, 2023). In this study, we ask: what social, political, and aesthetic attributes of large-scale energy projects impact public and political support for their development?

To better understand dimensions of community support, this study explores cross-partisan public and local elected official preferences for large-scale energy infrastructure projects across multiple dimensions including distance from residential areas, employment opportunities, local benefits, ownership structures, site type, and fuel type of energy generation. We use a conjoint experiment in two samples, a demographically representative sample of Pennsylvania, US residents (n=895) and a sample of local elected officials in Pennsylvania (n=206) to evaluate the marginal impact of different social, political, and aesthetic features of energy projects on support for project development. We focus specifically on Pennsylvania, a critical space for energy transition in the US.

Among residents, we find that creation of permanent, union-scale wage jobs, low impact on wildlife habitats, and cooperative community ownership increases respondent support for energy projects. Regardless of other features, resident respondents prefer solar and onshore wind projects to natural gas power plants with carbon capture and storage. Public support for energy projects decreases for nuclear projects and projects owned by non-US companies and state governments. Considering increasing polarization in the US and that federal climate change policy is framed as a highly partisan issue, our results are promising - we largely see consistency, rather than
heterogeneity, in preferences for energy infrastructure projects across parties. Support among local elected officials decreases for large-scale onshore wind turbines and when projects are owned by foreign companies. Additionally, local elected officials underestimate both public support for wind and solar and importance of employment gain and loss to their constituents.

We argue that planners can play a central role guiding equitable energy transition practices given the field’s expertise in coalition building, community engagement, and procedural justice (Goh, 2020; Knuth et al., 2022). As other studies point to procedural injustice and lack of meaningful public participation in energy planning, these issues are key to equitable transition planning (Elmallah & Rand, 2022). As energy project siting most often takes place at the local level, planners already play a key role in navigating stakeholder conflict and negotiating community benefits. Our findings contribute to this discussion by suggesting that a planning focus on project ownership and local employment opportunities may be particularly important to build community support for projects in PA.

Citations


Key Words: energy transitions, climate mitigation planning, energy justice, energy infrastructure planning

'MANAGED RETREAT' VS. 'UPLAND EXPANSION': COASTAL ADAPTATION PLANNING BY TRIBAL AND NON-TRIBAL COMMUNITIES IN THE PACIFIC NORTHWEST

Abstract ID: 1054
Individual Paper

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People frequently associate 'managed retreat' -- the prevailing term for community adaptation in the face of coastal hazards and shoreland loss -- with the surrender of local autonomy to insensitive bureaucracy, and an adversarial relationship with natural forces. Actual implementation is dominated by a narrow set of property buyout-based strategies that fragment communities, worsen social inequality and vulnerability, and reduce
collective adaptive capacity. In discourse and impacts, these problems have hampered just, sustainable coastal development. For Indigenous communities restricted to territories much smaller than those that supported their cultures prior to colonization – typically on land that is especially hazard-prone – the term ‘managed retreat’ and its property-focused implementation also evokes historical trauma, and expresses a colonizing attitude towards human-environmental relations. What planning practices and developmental policies would be more supportive of socially just, long-term, and collectively adaptive anticipation of changing coastlines?

Of the very few cases in the U.S. of communities acting to ‘relocate together’, as opposed to vacating vulnerable land piecemeal with individual buyouts, the largest concentrations are in Washington and Alaska, where Tribal and Indigenous communities have taken the lead. We present observations from over a decade of values-driven community planning for coastal change in the Pacific Northwest, including on-going partnerships between the Shoalwater Bay Indian Tribe (SBIT) as well as non-Tribal communities in South Beach, WA, the University of Washington, and the NSF-funded Cascadia Coastlines and Peoples Hazards Research Hub.

SBIT planners promote ‘upland expansion’ as the community’s best response to sea level rise, coastal erosion, and tsunami hazards. The Tribe is extremely vulnerable: its reservation includes the most rapidly eroding stretch of Pacific coastline in the lower 48 states; storms and landslides threaten its access and power supply; and its only buildable land is within 12 feet of sea level – well below projected inundation heights of a Cascadia Subduction Zone tsunami. SBIT has responded to the tsunami threat by building the first free-standing vertical evacuation tower in North America. SBIT has also purchased adjacent higher elevation land back from timber interests and is in the process of putting it in trust for upland development that will provide sites for local power generation, housing and services including elder assisted living, a justice center, administrative buildings, museum, health clinic, and “edible trails” for food sovereignty, active living, and retention of cultural traditions according to the principle that “culture is health” and self-reliance is key to resilience. The planning does not assume the immediate abandonment of low-lying houses or shore-based activity, but prepares a space for refuge and recovery should a disaster strike quickly, guides the gradual transformation of coastal function and relocation of the community as land is lost, and treats “home” as possibly spanning multiple sites.

While the Tribal/Indigenous context for adaptation planning is fundamentally distinct in legal and cultural respects from non-Tribal contexts, there are important correspondences across these contexts in the way ‘upland expansion’ planning may better accommodate the nuances of place attachment, community cohesion, and social-ecological relationships. The neighboring non-Tribal South Beach community of Westport has included language in its comprehensive plan update that enables annexation or acquisition of high ground for safer construction, even as the shore is adapted for continued use. ‘Upland expansion’ is important rhetorically to successful community engagement in adaptation planning – through evoking the redirection (rather than abandonment) of growth, or the reinhabitation of expropriated traditional living space – but it also presents substantive implications for policy, including putting land for collective relocation in trust, and allowing for the gradual incorporation of uphill activities into daily community life, prior to vacating existing home sites.

Citations


Key Words: Resilience, Adaptation, Coastal, Hazard, Indigenous

SOCIAL VULNERABILITY AND COLLABORATION NETWORKS IN FLOOD DISASTER RECOVERY PLANNING: A CASE STUDY IN HOUSTON

Abstract ID: 1056
Individual Paper

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Floods threaten most coastal communities in the U.S. However, flood impacts are not experienced uniformly by all communities. Socially vulnerable (e.g., low-income, racial minority) neighborhoods have consistently reported experiencing more damage during disasters and faced slower recovery times compared to others in the same community. Disparities in impact and recovery are partly due to discriminatory planning. Traditional government-led planning has failed to meaningfully engage socially vulnerable neighborhoods and overlooked their recovery needs. Moreover, engagement processes undertaken in the post-disaster period have lacked transparency and placated the interests of socially vulnerable households. Marginalization has reinforced preexisting knowledge gaps and power imbalances, thereby diminishing trust in planning processes and reducing coping capacities against flood disasters among highly socially vulnerable households.

Past examinations of plans and plan engagement processes argue that highly socially vulnerable groups lack voice and power. However, there is limited guidance on who needs to be targeted to remedy voicelessness in planning for flood risks and what methods could be used to identify them. This study seeks to address this gap by conducting a comparative analysis of the network of organizations involved in flood recovery in high- versus low-socially vulnerable neighborhoods. We asked:

What are the differences in how neighborhood, city, and regional organizations collaborate on flood recovery in the two neighborhoods?

What are the differences in the types of organizations that lead recovery?

Are there differences in the degree of access to recovery planning organizations?

This study is an early attempt to use social network analysis (SNA) to analyze social procedural inequities in flood recovery planning process. We selected high- and low-socially vulnerable neighborhoods in the City of Houston that were comparably flood-affected during Hurricane Harvey. Prior longitudinal evaluation of Houston’s network of plans have suggested that land use policy support for flood mitigation planning in the high-socially vulnerable neighborhoods worsened after Harvey. To analyze whether lower policy support is rooted in power imbalance, we conducted 24 interviews with neighborhood organizations. Interviewed organizations engaged in Hurricane Harvey recovery in the two neighborhoods. Interviewees represented neighborhood planning, civic, non-profits, and faith-based organizations. Combining name-generator and open-ended questions we analyzed the network of collaborators.

Preliminary analysis of the social networks presents new insights into inequities in collaboration on flood recovery. In low-socially vulnerable neighborhoods, planning and civic organizations lead recovery and long-term planning activity; they also foster collaboration with regional planning organizations. In high-socially vulnerable neighborhoods, non-profit and faith-based organizations lead recovery. They carry out short-term disaster
recovery activities and advocate for long-term policy changes. Yet the same non-profit and faith-based organizations are fragmented from key city and regional planning organizations. Organizations in high socially vulnerable neighborhoods report barriers in influencing policy discourse and recall a lengthy process of building trust and demanding transparency in planning. Yet, organizations in low socially vulnerable neighborhoods are able to leverage well-established pre-disaster relationships with planning organizations, exercise more influence, and expedite planning processes.

This suggests that, despite increasing attention to social equity, organizations that are knowledgeable of recovery needs in highly socially vulnerable neighborhoods continue to feel marginalized from long-term planning. From these findings, we identify stakeholders in the collaboration network who can address fragmentation. We also draw recommendations on how different types and scales of planning organizations can better design engagement processes to target marginalized organizations and establish and sustain partnerships with actors in highly socially vulnerable neighborhoods. We end by discussing special considerations for planning for social equity in the immediate aftermath of disasters.

Citations


Key Words: Procedural Equity, Disaster Recovery Planning, Social Network Analysis

LIVING WITH FLOODING: ASSEMBLING FOR COMMUNITY RESILIENCE IN TWO COMMUNITIES

Abstract ID: 1061
Individual Paper

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Flood-prone communities are often also those living near urban streams and experiencing benefits and disadvantages of living near waterways. They are often confronted with the realities of having to accept, expect, and build resilience to increasing frequency and severity of repeated floods. However, discussions around community resilience have largely been focused on building and utilizing social networks (Chamlee-Wright and Storr 2011)—rather than understanding how human and non-humans interactions can lead to heightened awareness of stewardship, taking care of nature as an integral part of their lived experiences. One potential way to address this gap is to recognize the agency of both humans and non-human elements in developing and maintaining resilient and sustainable ecosystems. Organically occurring landscape processes and green infrastructure such as nearby waterways or urban parks have been considered as having agency to influence their surroundings (Gabriel 2016). As active rather than passive non-human elements, they act upon other elements and cause change (Taufen et al., 2022)—potentially further impacting how communities perceive, act, and mobilize around them.
Increasingly, green infrastructures are powerful tools for maintaining urban landscapes because it is a major source of ecosystem services, or benefits associated with proximity to those infrastructures (Wilkinson and Osmond 2021). However, exposures to ecosystem disservices, or risks associated with proximity to organically occurring or built green infrastructure may be a stronger motivation for stewardship given the tendency for people to be more aware of risk such as flooding. We seek to understand to what extent the perception associated with risk of ecosystem disservices contribute to community assemblages in building resilience. We ask the following questions: 1) To what extent do flood-prone communities attribute flooding with proximity to and as a consequence of urban waterways?; 2) What community assemblages emerge from experiences with risks of ecosystem disservices?; and 3) in what ways do these assemblages of humans and non-humans actors contribute to building community resilience?

We utilize a case study approach of two communities in Des Moines, US and Jakarta, Indonesia that experience frequent and worsening floods due to their proximity to urban waterways. To understand how their relationship with nearby waterways influence their strategies in addressing challenges of living with water, we use multiple data collection methods including interviews, focus groups, site visits, community events, field notes, and spatial topography analysis. Our preliminary findings suggest that residents of these two flood-prone communities perceive flooding as inevitable brought upon within context of large-scale agricultural operations, rapid urban growth, and climate change leading to the normalization of living with flooding and enduring the increasing frequency and severity of repeated floods. The process of recognizing the benefits and risks associated with proximity to urban waterways is part of their mechanisms in building community resilience.

Citations


Key Words: community, resilience, assemblage, ecosystem

EMPOWERING COMMUNITIES FOR EQUITABLE CLIMATE RESILIENCE: CAPACITY BUILDING AND ADAPTATION IN HOUSTON

Abstract ID: 1117

Individual Paper

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Houston, Texas, experienced a record number of days with unsafe ozone levels in 2022. This, combined with extreme heat, exacerbates the health impacts of air pollution on vulnerable communities. Bullard’s environmental justice research (2000) reveals how a history of urban development and systemic disinvestment led to inequitable exposure to environmental hazards and extreme climate risk in communities of color. Climate change is expected to exacerbate existing environmental and health hazards. While Houston has developed long-term climate action plans and adaptation strategies, these investments primarily focus on flood mitigation and air quality monitoring, overlooking the effects of heat and compounding environmental hazards.

This paper proposes integrating neighborhood-scale capacity building and public space implementation into equitable resilience planning to address compound hazards and improve public well-being and health. Climate
adaptation actions should be linked to capacity building efforts in neighborhoods to establish a framework for resilience that addresses climate and health risks through a compound hazards lens. Considering Houston’s governance context, capacity building can assist in developing new management and planning policies for localized climate adaptation actions and address spatial inequities.

Focusing on Eastern neighborhoods, we first explore a new model for localized multi-hazard vulnerability analysis to identify climate scenarios that exacerbate health disparities. Second, we analyze the City’s neighborhood climate adaptation actions and sustainability policies to pinpoint opportunities to bridge hazard bias and respond to the compound risks identified.

This paper presents a case study analysis of how compound climate impacts can be addressed through transformative climate adaptation projects that support neighborhood-scale incremental actions, such as organizing and advocating for green and public infrastructure.

Citations


Key Words: Compound hazards, Climate Justice, Community capacity building, Climate adaptation implementation, Public well-being

BUILD BACK BETTER: FINDING SYNERGIES BETWEEN DISASTER RECOVERY AND CLIMATE ACTIONS IN IOWA

Abstract ID: 1144
Individual Paper

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Disaster recovery is crucial in building resilience against climate change impacts (Hoerney et al., 2016; Berke et al., 2014). But it is not part of leading planning discourses as other issues like housing, land use, and transportation (Tierney, 2007). Recent extreme events worldwide and in the United States have exposed the planning gaps in addressing climatic threats in disaster management practices. The planning profession has a social responsibility to seize disaster recovery as an opportunity to correct past mistakes that resulted in human, economic, and environmental losses due to the combined effects of disaster shocks and poor planning decisions (Schwab, 2014). With a case study of disaster recovery planning practices of the sixteen most disaster-exposed counties in Iowa, this research evaluates how reconstruction and recovery actions can offer opportunities to address climate change threats in urban and rural contexts.

Iowa is one of the most vulnerable states to climate change impacts in the United States (Burke & Emerick, 2016),
bordered by the two largest river systems of the country, Mississippi and Missouri. Sixteen Iowa counties along these rivers have experienced several disasters, including the 2019 and 2021 flood events in Scott, Muscatine, Louisa, Clinton, Jackson, Fremont, Harrison, Mills, Pottawattamie, and Woodbury counties. During these events, many communities and neighborhoods were left without clean water and power for several days, resulting in the loss of lives and properties in these counties. Extreme weather events, including flooding, winter storms, tornados, and droughts, are expected to increase in these areas due to climate change. To better understand the synergy between climate change and disaster recovery planning practices, the county disaster mitigation plans were reviewed using disaster recovery and climate action planning criteria, and 25 semi-structured interviews were conducted with emergency managers, planners, administrators, and disaster volunteers in these counties. Interview transcripts were analyzed, focusing on mainstreaming future climate change adaptation and mitigation measures in the post-disaster recovery and reconstruction of housing, roads, infrastructures, utilities, businesses, and natural environments. The major contribution of this research is methodological. Based on disaster recovery practices in Iowa, this research proposes a framework to mainstream climate change in disaster recovery planning, which is valuable for other cities and rural towns in the United States. Findings from this research are also relevant to address climate change in disaster recovery practices in other parts of the world where climate change impacts are unfolding with disasters.

Citations


Key Words: Disaster, climate actions, Iowa, planning framework, Recovery planning

CONTEXT-SPECIFIC OPERATIONALIZATION OF COMMUNITY RESILIENCE IN RURAL AREAS: IDENTIFICATION OF RELEVANT INDICATORS BASED ON LOCAL PUBLIC PERSPECTIVE

Abstract ID: 1148
Individual Paper

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Rural communities face a greater risk of being overwhelmed by natural disasters compared to urban areas due to their low risk management capacity (Cross, 2001). Building resilience in rural communities is often recommended to improve their ability to withstand such extreme events. However, it is crucial to understand what resilience means and how it can be observed in a rural setting. Given the diverse nature of rural areas, a context-specific approach is necessary to operationalize resilience. Multiple methodologies have been proposed in past literature to assess community resilience (Cutter, 2016, p.746). These resilience measures use a set of indicators to represent how resilience phenomena can be observed in a community. However, most of these measures have been designed for application in any context, and their indicator selection processes, driven by experts, do not address the location-specific nature of resilience (Cox & Hamlen, 2015). Moreover, the nested nature of resilience (Berkes...
& Ross, 2016) has not been addressed by most of these measures. This "nestedness" is exemplified by the crucial role played by households' nature and capacity in shaping the resilience of rural communities. Consequently, household resilience should be accounted for when assessing resilience at the community level.

In this paper, we present an innovative methodology to identify and implement relevant resilience indicators for communities in rural areas. We apply this methodology to study community resilience in two rural counties from the Western Upper Peninsula Region of Michigan. In our approach, we seek community members' opinion about the importance of aspects associated with resilience indicators in terms of how much they can affect the ability of their household and community to withstand extreme events. Using this data, we determine relevance of commonly prescribed and uniquely suited resilience indicators at both community and household levels for our study area. We observed that certain prescribed indicators that were relevant to resilience at the community level were not necessarily relevant at the household level. Furthermore, we noticed that the relevance of household level aspects (associated with resilience indicators) varied significantly across demographic categories, such as gender, age, highest education level, and annual household income. In contrast, the relevance of community level aspects showed less variability across demographic categories.

Additionally, we showcase the implementation of relevant resilience indicators using a data visualization platform for our study area, which aims to inform local decision-making. The platform integrates information on relevant resilience indicators, flood hazard data, and contextual information, such as critical infrastructure, to illustrate the potential impact of flooding events on communities and their capacity to withstand such events. Finally, we discuss the adaptability of resilience assessment with changing community perspectives and circumstances in the future through this platform.

Citations


Key Words: Community Resilience, Natural Disasters, Rural Communities, Context-specific Indicators, Public Participation

EXPLORING THE DRIVERS OF CLIMATE FOCUSED PLANNING EFFORTS IN THE NORTHEASTERN US
Abstract ID: 1155
Individual Paper

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This paper analyzes the motivation for climate action planning at the local level, exploring possible rationales, barriers, and affordances related to the adoption of local climate change policies and programs. Climate change is expected to bring increasingly intense weather events, which will manifest diverse and heterogeneous threats for local communities, requiring not only new approaches but a paradigm shift across all levels of governance, the economy and other societal sectors (Fussel 2007). These threats demand local adaptation, but some communities are far more prepared for coming hazards than others. There is evidence that witnessing hazardous weather
events or climatic extremes can influence someone’s opinion of climate change, which may contribute to this disparate attention on climate change related actions (Wachinger et al 2013).

We hypothesize that there are a variety of possible reasons for engaging in the creation of climate focused plans including standalone mitigation and adaptation plans, as well as inclusion of climate actions in comprehensive plans. We first hypothesize that direct experience with a severe weather event will be a primary motivator for climate actions drawing on the work of Hackenbruch et al. (2017) among others. Secondary drivers will include indirect experience (neighboring communities). While we also anticipate that pre-existing community factors such as population size, median income, partisan political affiliation, membership in state and regional climate partnerships will have a measurable influence on climate action, we anticipate the direct or indirect experience with a severe hazard event will have the most powerful effect on climate action.

The northeast coast of the US has seen numerous severe tropical cyclones and other extreme rain events in the last decade, many of which left lasting impressions on the affected communities. But there has been limited investigation into whether this effect manifests in local climate adaptation policy in a region generally considered to be among the leading edge of states addressing climate issues at the state level. We evaluate the climate adaptation plans of all 461 coastal and riverine municipalities and 38 coastal/riverine counties in New York, New Jersey, and Connecticut and assessing their scientific fact base, acknowledgement of climate threats, and climate change mitigation and adaptation commitments. We then compare those climate action plan scores to the incidence of extreme precipitation from 2000 to 2021, based on climatologies of precipitation derived from the PERSIANN-CDR dataset. We also compare the uptake of climate action in communities with FEMA declared disasters in the same time period.

Preliminary results show that less than one third of surveyed communities have published a dedicated climate action plan. However, two thirds of these action plans cite preview destructive storms as motivation for their adaptation measures. This suggests that most communities have not begun adapting to climate change on the local level, but that future storms may act as an impetus to motivate that action. Ongoing analysis will evaluate the impact of additional potential drivers of action (e.g. community socio-demographic characteristics) and case studies of 6 communities (two in each state) will further unpack the drivers of climate action and the role of extreme events as a driver of planning and related actions. The paper also illustrates how the integration of climate data (e.g. sophisticated analysis of large scale meteorological datasets) can help inform new areas of planning research.

Citations


Key Words: Climate planning, Coastal hazards, Climate science

THE EFFECT OF FEDERAL RECOVERY FUNDS ON MITIGATION BEHAVIOR
Abstract ID: 1162
Individual Paper

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As the severity of climate impacts and disaster frequency continue to rise, households and businesses in hazard-prone areas are increasingly faced with the decision to leave from, stay in, or structurally harden their current location. Mitigation programs like buyouts can help residents move to safer locations, yet new research has shown that these programs still struggle to keep up with growing risk and development (Hino et al., 2023). Disaster assistance after major events may additionally subvert mitigation efforts as many recovery programs often have more substantial resources that facilitate rebuilding in the same location (Olshansky & Johnson, 2014; Graham, 2007). The U.S. Small Business Administration Disaster (SBA) Loan Programs is one of the largest providers of post-disaster business and housing assistance, offering low-interest loans towards rebuilding damaged property; however, the additional debt burden—even if low-interest—could affect the financial ability of loan recipients to move or structurally improve, though research is lacking on whether and how recovery programs influence post-disaster mobility and mitigation decision-making. Furthermore, despite the critical link between homes and businesses in disaster-affected areas (Xiao & Van Zandt, 2012), buyouts often focus on residential neighborhoods and little is known about how decisions around moving and mitigation might differ between residents and businesses.

This study identified patterns in mobility after disaster events for business and residents that received SBA recovery loans in Galveston County after 2008 Hurricane Ike and 2017 Hurricane Harvey. Specifically, we sought to understand: (1) What factors influence decisions to relocate for businesses and residents in hazardous areas? (2) Does disaster assistance encourage or discourage residential and business mitigation and mobility? We used a mixed methods approach, combining survey, interview, and administrative data from local and Federal government sources. The administrative data—including loan data, parcel data, and inundation data—provided a broad overview of how loan amount, damage, structural characteristics, and community characteristics correlated with homeowner and business decisions to relocate after the event. Surveys and interviews of loan recipients provided a deeper understanding of the decision-making process after both disaster events and how funds were ultimately spent.

We found that when it came to relocation decisions, damage and disaster risk were important themes across all analyses. Higher damage was consistently and significantly associated with moving for businesses and households after both events. Disaster risk was ranked third in importance in the survey for both businesses and households and was commonly discussed in the context of relocation in interviews. However, the survey and interviews also highlighted that disaster risk is tied to place, and place is meaningful for people. Both businesses and residents ranked personal ties to their location as second most important in their decision to move or remain at their current location. Interviews revealed that this was a lens through which participants interpreted mitigation options in the context of future risk: those with fewer or weaker attachments felt more mobile, whereas those with strong attachments often pursued structural mitigation strategies and hardened in place. Although disaster risk and community attachment influenced types of mitigation strategies, feasibility of these strategies was a financial issue. Economic considerations were the highest ranked factor in the survey: businesses ranked their existing customer base as most important and residents cited proximity to their job as most important when it came to relocation decisions. Some survey respondents indicated that receiving disaster assistance affected their decision to move or stay and that a portion of recovery funds were used to mitigate against a future disaster, however interviews suggested that SBA loans were often a facilitator rather than a catalyst for mitigation decisions.

Citations


Key Words: Disaster, Mitigation, Assistance, Buyouts

MIS-BELONGING TO THE GREEN RESILIENT CITY: CLIMATE ADAPTATION PLANNING AND PLACEMAKING IN URBAN MULTI-RISK COMMUNITIES
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Individual Paper

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Climate adaptation planning is an increasingly key urbanism practice by which cities are transforming places and neighborhoods by altering socio-ecological features and relations, most recently through green climate resilient infrastructure (GRI). Yet, GRI’s incorporation into existing, racialized infrastructure systems of urban development, regeneration and finance/investment has raised questions about the social-cultural impacts and justice dimensions of climate adaptation planning and urbanism. Critical urban scholars highlight the close ties between green infrastructural development and economic growth strategies (Gould & Lewis, 2021; Long & Rice, 2019) which by prioritizing consensual politics and techno-managerial solutions tend to undermine procedural and epistemic justice for historically marginalized communities. Moreover, the analysis of climate gentrification highlights how the uneven distribution of GRI perpetuates divided communities, with environmental privilege for white and wealthier residents, and residential displacement and exposure to new climate hazards for lower-income residents and communities of color (Shokry et al., 2022). Much of the critical literature on climate urbanism, therefore, points to forms of exclusion, segregation, dispossession, and erasure being reproduced through the intertwining of resilience, regeneration and growth interests, including through continuing processes of climate coloniality. Recently, however, scholars have called for expanding the scope of climate urbanism research beyond either/or scenarios such as inclusion or exclusion, possession or dispossession, by exploring the multi-faceted and sometimes contradictory dimensions of the lived experience of GRI-driven adaptation planning and placemaking (Castán Broto & Robin, 2021) in particular for sense of belonging. There is an emerging recognition of the need within green planning to radically repoliticize the concept of belonging by critically engaging with its settler colonial and racial capitalist legacies (Barry & Agyeman, 2020), toward activating alternative forms of belonging, social relations and placemaking. To further develop the notion of belonging within green resilient planning, our paper asks: How is sense of belonging shaped and (re)configured through green climate resilient infrastructure? What do those pathways of belonging mean for urban climate justice? Via an analysis of qualitative data, we examine the lived experience of GRI-driven climate adaptation planning and placemaking through the lens of an array of social and environmental justice actors in East Boston, a rapidly gentrifying neighborhood facing mounting climate risks and impacts which has historically been a point of entry and settlement for lower-income immigrants and minoritized groups. Our case study of East Boston demonstrates three main pathways through which belonging in the green climate resilient city becomes disaggregated into four context-specific, complex and overlapping forms. This paper contributes to a burgeoning interest in understanding the socio-cultural implications of urban climate action at the neighborhood scale. It reveals a multi-faceted experience of gentrification and displacement and may facilitate new possibilities for more nuanced green resilient urban strategies. It further reveals the kinds of political subjects and socio-cultural relations that emerge from the lived experience of climate adaptation projects, and sheds light on how less visible placemaking practices and alternative modes of addressing socio-climate vulnerability contribute to climate justice and injustice dynamics.

Citations

Key Words: climate resilience planning, green infrastructure, belonging, climate justice

UNEVEN RESILIENCE: WHAT IS CLIMATE ADAPTATION ACROSS TEXAS COLONIAS?

Abstract ID: 1194
Individual Paper

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This paper examines interactions between manufactured housing and climate adaptations in informal settlements called colonias along the U.S. – Mexico border. Climate adaptations offer an array of benefits, including resilience, or the self-reliance of societies, and an increased capacity of infrastructure to withstand disruptions. Climate adaptations can also present the challenge of uneven resilience, or the unequal capacity of communities to participate in the change that transforms their neighborhoods. The problem of uneven resilience in high-growth areas has been partially resolved by redevelopment organized around persistent change, rather than the focus on stability as is common in conservative conceptions of resilience. Given critical gaps in our understanding of climate adaptations to manufactured housing characteristic of colonias, in which persistent change through years of intensive use has led to building disrepair, this paper examines what incremental upgrading strategies might effectively allow residents to prepare for climate events while recovering deteriorated housing stock.

Drawing on field-based research, I explore why climate adaptations vary across El Paso and Brownsville colonias and how variations affect dwelling integrity and resident health and safety. This research is part of a larger research project that has the objective of using participatory technologies to develop sustainable informal housing densification strategies for Texas colonias. Methods that support this paper are a combined household survey and an intensive post-occupancy building analysis to document manufactured home type and resident adaptations over time. With these data, a parametric 3D modeling tool was used to visualize how existing patterns of climate adaptations impact future alternatives. Although some climate adaptations compromise building integrity (such as second roofs that add weight that manufactured homes cannot effectively distribute), others enhance resident ability to conserve water and reduce electricity consumption, ultimately reducing utility costs. Greater precision about the evolution of climate adaptations to manufactured housing in colonias provides insights about types of resilience underrepresented in cities, in urban planning, and in architecture that, if scaled up, could ensure consideration of building decline in the sustainable redevelopment of cities.

Citations


Key Words: housing informality, colonias, sustainability, sociotechnical systems, manufactured housing

ENVIRONMENTAL EDUCATION OF PLANNING LEADERSHIP: DOES IT IMPACT THE ADOPTION AND TYPES OF LOCAL SUSTAINABILITY-PROMOTING PLANS?
Abstract ID: 1195
Individual Paper

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Planning for sustainability, resilience, and climate change mitigation and adaptation has become an integral part of planning practice in many local governments across the nation. Planning scholars have shown that the factors that lead to the adoption and implementation of plans and other initiatives to protect natural resources, prepare for and mitigate climate change, and encourage sustainable development include local government planning capacity (e.g., presence of professional planners on municipal staff, staff dedicated to environmental management, leadership size), community characteristics (e.g., wealth, community size, metropolitan status), local stressors (e.g., growth pressures, natural hazards), as well as institutional structure and culture (Berry and Haddad 2022; Gocmen and LaGro 2016; Laurian, Walker, and Crawford 2017; Opp, Osgood, and Rugeley 2013; Svara, Watt, and Jang 2013).

In this paper, we investigate a specific aspect of local planning capacity: the extent to which planners’ environmental education, knowledge, and know-how enable communities to adopt dedicated plans to promote sustainable development and prepare for climate change challenges. In particular, we examine the adoption of a variety of municipal plans including Sustainability Plans, Climate Action Plans, Renewable Energy Plans, Comprehensive Plans, and Green Infrastructure Plans and the local determinants of plan adoption.

In the Fall of 2019 and Winter of 2020 (pre-COVID), we surveyed 253 planners in a random sample of 214 municipalities across the nation. From those, we extracted the responses of 111 senior planners, planning directors, and city managers who are most experienced and knowledgeable about local plan adoption and implementation strategies. Our study finds that about two-thirds of these communities have adopted at least one environment-centered plan. We anticipate the study will find that, controlling for state mandates, jurisdictions adopt a wider range of plans if they have higher overall capacities (e.g. population size, median income, budgets), communities prioritizing environmental quality, planning leadership with higher environmental knowledge and competencies, planning capacity (e.g., staffing and financial sources), and experience with and risks of natural disasters (e.g., wildfires and floods). The study also explores how those factors impact which type of plan (e.g., climate, green infrastructure, renewable energy) is adopted.

Citations


Key Words: Sustainability, Climate change, Plan adoption, Planning capacity, Environmental knowledge and competency

THE INFLUENCE OF WATER QUALITY ON LAKE CULTURAL ECOSYSTEM SERVICE—EVIDENCE FROM 182 U.S LAKES

Abstract ID: 1200
Individual Paper

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Cultural ecosystem services (CES) are the intangible benefits that humans receive from nature, which often hold greater significance for individuals compared to material benefits (Gray, 2011; Kobryn et al., 2018). Lakes are highly valued for CES because they provide opportunities for recreational activities, aesthetic experiences, and spiritual enrichment and reflection (Blicharska et al., 2017). Although water quality cannot be viewed exclusively as an ultimate ecosystem service (Keeler et al., 2012), it constitutes a crucial component of numerous ecosystem services, especially CESs such as leisure and human wellness. However, existing research focused more on the lakes’ ecological ecosystem services related to water quality, while CES were less studied. The direct linkage between water quality and CES of lake has not been well established yet. Also, research on lakes’ CES at regional scales was limited due to the difficulties in CES measurement across broader scales.

Here, we hypothesized that lakes’ CES and their ecological characteristics were related. Specifically, water quality of lakes influences CES by affecting visitation and recreational behaviors. With rich semantic and sentimental information from textual contents on social media, we could quantify how people value and perceive CESs. Specifically, we coupled google review data and National Lake Assessment (NLA) data to examine the effects of water quality on CES and visitors’ sentiments in 182 lake-front public parks across the US.

This study drew up a cascade of three methodological stages: First, we collected geographic information of the 182 public-owned lakes, extracted the near-lake parks with public access, and obtained around 40,000 text reviews with 5 or more words using Google Place API and Python Crawler. We then selected reviews relevant to CES using machine-learned keyword labels through content analysis; Second, we derived positive, neutral, and negative sentiments based on CES-related, user-generated textual contents using natural language processing with Google Cloud Natural Language API; Third, we identified the association between critical water quality indicators (e.g. color, turbidity, Chlorophyll-a concentration), lake characteristics, and lakeshore characteristics derived from NLA with CES related visiting sentiments using multivariate regression.

Our results showed that the CES provided by lakes were significantly affected by multiple water quality indicators. Notably, lakes with higher CES values were characterized by less turbidity, lower Chlorophyll-a concentration, and lower APHA color value. Additionally, sentiments related to lake CES were determined with the joint effects of park characteristics, lake shore characteristics, and water quality. By building the linkage between water quality, CES, and visitors’ sentiments, this study provided evidence for sustainable planning strategies and water quality regulations to achieve a higher level of lake CES. Moreover, analysis of user-generated text contents for sentiment
evaluation can yield valuable information regarding user satisfaction and memories of scenes, and thereby facilitate lake management practices to foster sustainable local economic development.

Citations


Key Words: Cultural ecosystem services, Water Quality, Content analysis, Sentimental analysis, Social media

FRAMING MANAGED RETREAT IN ADAPTING TO COASTAL HAZARDS

Abstract ID: 1208
Individual Paper

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Managed retreat is one of the three main strategies used to adapt to coastal hazards and involves abandonment of land and structures in vulnerable areas and resettlement of inhabitants. A review of the coastal adaptation literature shows that planning research has largely focused on protection and accommodation strategies in comparison to retreat of existing settlements and infrastructure as in many cases retreat may not be an economically viable option unless the risk is too high (Dedekorkut-Howes et al. 2020). More importantly, managed retreat is politically the most controversial and least publicly acceptable sea level rise adaptation option and community resistance poses a significant barrier to retreat initiatives. Retreat has been viewed as a “dirty word” or a “last resort” in planning and due to the negative connotations of the term, which evokes strong political and public opposition, it has occasionally been reframed as ‘managed realignment’ (Torabi et al. 2021). Research on managed retreat case studies mostly focus on reactive post-disaster resettlement rather than proactive cases (Ajibade et al. 2022; O’Donnell 2022). Globally, proactive managed retreat initiatives have so far been limited to very small-scale settlements or infrastructure due to the political, legal, financial, social, technical, and regulatory complexities.

A review of Australian state coastal policies showed that most states are focusing more on protection and accommodating the coastal climate change impacts as opposed to retreating from the coast (Dedekorkut-Howes et al. 2021). In 2016, government of the most vulnerable state to coastal climate change impacts in Australia, Queensland, launched the QCoast2100 program which funds coastal local governments to prepare Coastal Hazard Adaptation Strategies (CHAS). This paper uses the QCoast2100 case study to examine how local CHAS documents consider retreat and how local governments navigate the complexities of this controversial adaptation option in Queensland. The methods include content analysis of the 21 completed local CHAS documents as well as data from 46 in-depth semi-structured interviews with local government officers, consultants, program managers, and expert panel members who were involved in the preparation and implementation of the CHAS documents. Interviews specifically sought to understand public engagement processes and management of controversial topics such as retreat within local governments as well as with the public. NVivo qualitative analysis software is used for coding the strategies and the interview data.
Findings indicate that the term retreat is viewed to be controversial and in general avoided where possible. Some interviewees pointed to the “combative” and “military” nature of the traditional “Protect, Accommodate, Retreat” language and argued that this approach is not helpful in climate adaptation discussions, which in itself can be controversial in this conservative state. Transitioning and repurposing are the popular substitute terms CHAS documents prefer to use. This change in some cases originates from elected local government officials avoiding controversy, in others from local government staff or consultants who managed the public engagement process. In general, the CHAS documents do not view retreat as an urgent issue, but as something that needs to be considered in a couple of decades time. Local governments are unwilling to commit to options they cannot fund and that may prove unpopular in their electorates. In this regard, adaptation pathways approach provides local governments a way to consider retreat broadly and generally without making any firm commitments. The couple of decades ahead is expected to get the local area residents used to the idea of transitioning. However, current plans and discussions do not provide a roadmap of how retreat can happen and be financed. The lack of even small-scale pilot studies will make implementation difficult when those decisions can finally be made.

Citations


Key Words: Coastal adaptation, Sea level rise, Managed retreat, Local adaptation

IMMERSING THE TIDE BEYOND THE FENCES: SOCIAL REPRESENTATIONS AND SOCIO-ENVIRONMENTAL CONFLICTS IN THE PARQUE DOS MANGUEZAIS, RECIFE - BRAZIL

Abstract ID: 1228
Individual Paper

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The establishment of protected areas emerged as the primary and most recurrent nature conservation policy developed in the 20th century (BRESSAN, 1996). It revolves around a dichotomy that integrates what is understood as natural and what is understood as anthropic. This idea derives mainly from a mythical and romantic vision that values nature for its untouchability (wilderness).

The US experience was exported and absorbed by several nations, especially Latin American countries, which started to create their national parks and systems of protected areas (DIEGUES, 2001). This research explores how
this safeguarding model influences the dissociation of the concerned populations from their surroundings. It deals with nature conservation in an urban context, especially the forest fragments established as conservation units by municipal legislation. We conducted a case study in the Parque dos Manguezaís, a conservation unit within the Recife urban boundaries and one of Brazil's most significant urban mangrove ecosystems.

We ask how the current legal and policy instruments for nature conservation in urban areas still reverberate the dissociative assumptions around natural and anthropic. We understand that this identified dissociation is responsible for suppressing practices and ways of life in riverside communities.

Through the theoretical-methodological contribution of the theory of Social Representations, proposed by Serge Moscovici, in social psychology, it was possible to immerse ourselves within the realities and dynamics of these groupings. According to the author, social representations are mental structures elaborated and shared among community members (MOSCOVICI, 1978). The actions and decisions taken in certain situations are, in the first instance, the product of these representations (JOELETT, 1989). To this end, twenty-four semi-structured interviews were carried out with residents around the Conservation Unit, corresponding to seven interviews in the Bode community, four interviews in Jardim Beira-Rio, four interviews in Areinha, six interviews in Ilha-de-Deus and three interviews with residents of stilt houses (palafitas) in Vila da Imbiribeira.

These interviews were transcribed and analyzed using the Iramuteq software to understand the different social representations elaborated by these groups. Based on the analyses, it was possible to discuss how other communities relate to the ecosystem and how subsistence activities, especially fishing, act as solid representation markers in these locations. Finally, the representations were confronted with the Management Plans of conservation units in Recife, identifying that these still incur in the historical and dissociative error between what is considered as nature and human, a factor by which social and cultural conflicts are engendered which gradually suppress the remnants of the ecosystem and the sociocultural identities of communities in urban territory.

This research seeks to shed light on how international nature conservation policies relates with the Latin American panorama, in particular Brazil. In addition, it will be demonstrated that the nuances of Brazilian urban society and its contradictions, explicit in the social representations identified, are opposed to the legal principles and restrictions imposed by the institution of protected areas.

Citations


Key Words: Conservation Units, Social representations, Urban natural conservation

AN ALTERNATIVE MODEL FOR ENERGY TRANSITION: THE CASE OF COMMUNITY-OWNED SOLAR ENERGY DEVELOPMENT
Abstract ID: 1237
Individual Paper

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The United States (U.S.) is committed to reaching net-zero emissions by no later than 2050. Lots of attention is being placed on making the transition to renewables in electricity generation which will have a spillover effect on decarbonizing other sectors. A recent report released by the U.S. Energy Information Administration (EIA) notes
that renewables have become the fastest growing energy source in the U.S., reaching 24 percent of all utility-scale electricity generation in the first six months of 2022, and solar accounted for almost 39 percent of all new electricity generating capacity added to the grid in the same period. Solar energy is moving at the fastest pace in the transition from fossil fuels among all sources of renewables. Yet, many utility-scale solar energy projects are being met with public backlash resulting in prolonged project delays and cancellations. This is primarily because local communities, particularly under-resourced groups, usually have to bear a disproportionate share of the associated risks so the many can benefit. There is an alternative option.

Community solar is beginning to gain traction as we see a gradual uptake of project implementation at various scales and locations. Community solar provides financial benefits in the form of bill savings to many Americans including renters and low-income households. Among different models of community solar, community-owned solar is becoming the next viable solution for vulnerable communities that face serious energy burdens often concentrated in BIPOC and older adult households living in low income multifamily housing. Given its ease of installation, solar energy is an attractive option, and many communities are seeking to own and operate new facilities; but, despite its increasing financial competitiveness and recent technology improvements, it is often unclear to many communities, particularly those that are under-resourced, the steps they must take to own and operate solar facilities of their own. Further, there are a number of barriers for a widened community access to community-owned solar including high upfront costs, lack of enabling policies, and continued resistance from Investor-owned Utilities (IOUs).

This paper introduces the ways that intermediaries or intermediary organizations of various kinds have helped to promote community-owned solar energy development across the U.S. and overcome some of these barriers. Based on interviews with 28 intermediary organizations and surveys of more than 300 members of community solar cooperatives in 15 states, I have been able to determine that intermediary organizations involved in promoting community-owned solar energy development have been successful by focusing on (1) enhancing community understanding of the solar energy status-quo (i.e., production and distribution options); (2) informing project design and financing efforts, (3) providing procedural guidance; (4) helping to promote changes in local, state, and federal policies and programs, and (5) supporting local organizational and political capacity-building. Intermediaries in the community solar context include community-owned cooperatives and energy justice organizations along with a variety of governmental support offices.

From the data I have collected, I think it is fair to say that community solar focused intermediaries are working primarily to empower under-resourced and under-represented communities by helping them move toward community ownership. They empower communities by helping them apply technical information, mobilize networks and partnerships, and build local movements to promote distributed, decentralized, and democratized energy systems. As part of America’s efforts to decarbonize the economy, community-owned solar energy development ought to be advocated at the state and local policymaking context working in partnership with already existing intermediaries that seek to empower the communities and enable a just energy transition.

Citations

INVESTIGATING EXTREME HEAT STRATEGIES FOR U.S. CITIES
Abstract ID: 1243
Individual Paper
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Extreme heat, amplified by climate change, is one of the main public health crises facing American communities. Though emergency response plans have been shown to save lives in times of extreme heat, most US cities today do not have emergency heat response plans and are not adequately prepared to respond to an extreme heat crisis. Due to historical and continued disinvestment in low-income and non-white communities across our country, urban residents frequently do not have the necessary tools and resources needed to adequately respond to the increased hazards hastened by climate change. As such, research is needed to help cities and vulnerable communities better prepare for, and address, the challenges of climate change.

In order to reduce heat related illnesses, cities must appropriately plan for extreme heat through the development and implementation of comprehensive heat management plans. This research project is part of an on-going study to survey how cities across the the country are preparing for and responding to extreme heat. As such we conducted a nation-wide assessment of city, county, and state level heat response plans (HRPs) to identify how cities across the country are planning for extreme heat. We surveyed the 10 largest Metropolitan Statistical Areas (MSAs) to identify and categorize the various strategies employed in these HRPs. To do this, we have developed an evaluation framework and scorecard for heat response plans. The evaluation framework consists of six categories, 15 subcategories, and 68 total metrics. The 6 overarching categories for heat response plans include: Mitigation, Adaptation, Data Generation and Analysis, Community Engagement, Emergency Response, and Leadership. In addition to categorizing the plans, we assess the degree to which strategies are targeted and tailored to vulnerable populations, and explore the extent to which communities are included as active stakeholders.

From our survey of the 10 largest MSAs, we identified city and county level plans and policies that focus on protecting their communities from extreme heat. Through the collection and documentation of these plans, we identified best practices, uncovered gaps and opportunities for improvement, investigated heat management frameworks, and identified actions that communities can take to respond to climate change. Moving forward we plan to create a database of extreme heat response plans and develop and prototype a toolkit of best practices. Creating supportive frameworks, toolkits, databases, and protocols can help cities develop and implement comprehensive heat management plans, strengthening their overall resilience to the climate change crisis.

Citations


Key Words: extreme heat, climate resilience, heat response plans, urban heat islands.
As the global climate becomes more unpredictable and urban areas continue to grow, urbanized areas are being exposed to more intense heat. Extreme heat exposure in urban areas is concerning, especially given its adverse impacts on human health and wellness. San Antonio, Texas is no exception as one of the U.S. cities with the highest population growth. While walkable environments are known to promote activities and healthy behaviors, walking in areas of higher temperature may actually increase potential health risk. This is particularly concerning in San Antonio’s low-income communities with more walkable urban forms due to their proximity to the high-density downtown area. In fact, low-income communities in San Antonio tend to face more heat exposure and have lower level of tree canopy coverage compared to other areas. To address this issue, we investigate urban form and structures that promote walkability in connection to potential heat exposure at the community level.

This study investigates the geographic distribution of the walkable environments in San Antonio to identify potential heterogeneity in socioeconomic characteristics at various levels of walkability. Additionally, we measure urban heat exposure as a barrier to walking and distinguish areas that are walkable yet exposed to higher temperature. Walkable environment is measured using EPA Smart Location that calculates National Walkability Index factoring land use mix, intersection density, and transit stops. Heat exposure is measured with land surface temperature using LANDSAT 8 remote sensing data for the summer of 2019. Socioeconomic characteristics are measured using American Community Survey (5-year estimates, 2015-2019). Using walkability as the dependent variable, we measure the association between neighborhood socioeconomic characteristics, urban heat exposure, and walkability. We also create four types of walkability by the combination of (1) high/low walkable environments and (2) high/low levels of urban heat. These four types are mapped onto San Antonio block groups to identify differences in neighborhood characteristics.

The preliminary results of the regression analysis indicate that neighborhoods’ socioeconomic characteristics are significantly associated with walkable environments. Specifically, higher income areas tend to have a lower level of walkability (p<0.001), yet areas with more college degrees show a higher level of walkability (p<0.001). Areas with more Hispanic populations and housing vacancies also tend to have a higher level of walkability (p<0.001). Higher surface temperatures are also associated with a higher level of walkability where one Fahrenheit degree increase is associated with a 0.547-point increase in walkability index (1-20). This indicates that walkable areas are also exposed to higher temperature, which could raise questions about the area’s actual walkability. Among the four types, areas with low walkability and high temperature would indicate areas where automobile mobility is prioritized with a high amount of impervious surface raising the temperature. Areas with high walkability and high temperature would represent conditions that suppress healthy environment due to the higher level of heat exposure.

Our findings suggest that microclimate conditions should also be taken into consideration when encouraging walkable environments to promote activities and healthy behaviors. This is especially critical for low-income communities near downtown San Antonio where urban form is set to promote walkability but instead worsens health risks through aggravated heat exposure. To lower health risks, these areas require proactive mitigation efforts through design interventions including greater tree canopy coverage and cool pavements.

Citations

Key Words: heat exposure, walkability, San Antonio, environmental justice, urban form and structures

YOUTH ON PARKS, PLANNING, AND POLICY: ENVIRONMENTAL JUSTICE INSIGHTS THROUGH PHOTOVoice IN PHARR
Abstract ID: 1275
Individual Paper

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One of youth climate activism’s distinguishing features is its attentiveness to intersecting forms of oppression. Young people involved in youth-led activist organizations use intersectionality in two ways: as an analytical framework for interlocking forms of power and oppression; and to describe and act upon the interconnectedness of a wide range of issues, such as climate change and gun violence (Conner et al., 2022). In California’s Central Valley, where communities have long-experienced some of the worst environmental stressors in the country, for example, youth identified the biggest threats to their communities as “three Ps’: police, pollution, and prisons, enhancing conventional understandings of environmental harm (Braz and Gilmore 2006, 96). This “intersectional politicization” (Conner et al., 2022) is activated to build allyship, and can involve the use of culturally relevant and cross-generational forms of mobilization (Gallay et al., 2016). In their study on the impact that educational background and socio-economic status have on youth’s engagement with environmental politics, Ary and Henn (2023) found that even “standby” youth—those not actively involved—were deeply concerned about the environmental and climate crises. Youth from low-income backgrounds highlighted global economic inequality, capitalism, and colonialism, while higher socioeconomic status youth did not raise economic structures at all, highlighting how intersectional thinking and action are contingent and contextual.

This manuscript presents young people’s concerns about and priorities for two parks in Pharr, TX. The first, Jones Box Park, is in the historically Mexican American neighborhood of Las Milpas, is located just three miles from the U.S.-Mexico border, and sits in the Arroyo Colorado floodplain. The second park site is a 27-acre property that the City of Pharr recently acquired and envisions as a nature site. Pharr parks are underutilized by youth, especially in Las Milpas, where the poverty rate is greater than 60% and the population is more than 95% Latina/o. To enhance the parks’ design and programming in ways that are more responsive to youth, this project employs community-based participatory research methods that identify young people’s park concerns, priorities, and visions for the future.

Community-based participatory action research seeks to transform the realities of marginalized people through action and tries to engage those who are often the “subjects” of research in more democratic practices of knowledge production. The reasons to engage in this type of research come from a broader tradition of popular...
education and liberatory pedagogy (Caraballo et al. 2017). These approaches, which include youth participatory action research (YPAR), draw heavily on Paulo Freire’s idea of critical awareness (conscientização), a crucial process for people to be able to change the conditions around them. Rodríguez and Brown (2009) present three guiding principles of YPAR: it fosters situated knowledge production (24), is a collaborative and participatory process in every stage (27), and it produces transformative possibilities (30). Our manuscript builds on existing knowledge about the potential of youth-led inquiry around health equity (Ozer et al. 2020) and environmental justice work (Schusler, Krings, and Hernández 2019). We used the photovoice method (Wang & Burris 1997) to elicit creative thinking in ways that respond to youth’s everyday realities and contexts in relation to the environment. This method proved to be an important way for us to honor the YPAR principle of encouraging youth to produce situated knowledge, that which comes from their embodied everyday being in the world. We partnered with Texas Children in Nature Network, an environmental organization, to work with youth over three workshops with 21 young people between the ages 15-18. We find that Pharr youth’s priorities reflect intersectional approaches, as well as pressing climate injustice concerns, ideas which require new park planning priorities and policies.

Citations


Key Words: Environmental Justice, Parks, Youth


Abstract ID: 1297
Individual Paper

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In summer 2022, extreme heat affected many US cities. Historical patterns of discrimination and disinvestment, such as redlining, have contributed to the current urban heat vulnerability. Recently, researchers have shown interest in redlining’s legacy on heat exposure, yet comprehensive, nationwide studies examining its impact on climate change trends are scarce. This paper investigates the legacy of redlining on heat exposure and vulnerability in relation to climate change patterns from 2000 to 2020.

We address two questions: 1) What is redlining’s legacy on land surface temperature (LST) changes from 2000 to 2020? 2) What are the potential implications of this legacy for heat vulnerability? Utilizing cloud computation platforms for remote sensing images, we analyze LST changes across 20 years for 8,875 redlining parcels in the US, spread across 196 redlined cities (now 145 CBSAs). LST calculations and Tukey's HSD test reveal that urban
retrofitting projects, such as regreening, have led to significantly smaller LST increases in redlined areas, particularly Grade D zones.

Additionally, this study finds that, over the past 20 years, displacement has occurred in historically redlined areas, particularly in rapidly growing Sunbelt cities. This displacement is evident through significant decreases in African American and low-income residents. Consequently, urban heat adaptation improvements, such as regreening, may not benefit disadvantaged populations in historically redlined areas.

Citations


Key Words: Redlining, Heat vulnerability, Environmental justice, Displacement, Geo-computation

EQUITY THROUGH WATER: A COMMUNITY-BASED PARTICIPATORY MODEL

Abstract ID: 1321
Abstract within Pre-Organized Session 93

PEREZ, Omar [University of California Irvine] operezfi@uci.edu, presenting author

This community-based research aims to explore how collaborative models can be implemented to support equitable approaches to address water-related climate events such as droughts, floods, and storms in Puerto Rico. The study focuses on understanding the perspectives of community partners, grassroots organizations, and government officials involved in the implementation of water-related policies and programs in the region. Using a mixed-methods approach, including surveys, interviews, and document analysis, the study examines the extent to which community-based research can inform the development of collaborative models that support equitable access to water resources. The findings highlight the importance of involving local communities and organizations in decision-making processes, as well as the need for greater collaboration and communication among all stakeholders involved in water-related policies and programs. The study concludes that community-based research can serve as a valuable tool in facilitating equitable approaches to water-related climate events, ultimately promoting sustainable development in Puerto Rico.

Citations

URBAN FORM INFLUENCES ON CLIMATE RESILIENCE: EMPIRICAL EVIDENCE FROM EXTREME HEAT EVENTS
Abstract ID: 1345
Individual Paper
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Systematic understanding of climate resilience in the urban context is essential to improve the adaptive capacity in response to extreme weather events. Although the urban built environment affects climate resilience, empirical evidence on the associations between urban form and climate resilience is rare in the literature. In this study, urban heat resilience (HR) is measured as the land surface temperature (LST) difference in a given urban area between normal and extreme heat event, and it further explores the impact of two-dimensional (2D) and three-dimensional (3D) urban form features on HR. This study uses the Macau in the Asia-Pacific region as the study area since Macau is a representative high-density city in Asia. Moreover, Macau is a very typical area affected by extreme heat events caused by climate change. Using spatial regression, we find that Both 2D and 3D urban form factors have significant impacts on urban heat resilience. Not all the factors that affect land surface temperature would significantly influence heat resilience. Solar insolation and water density are the dominant factors in determining land surface temperature in Macau. However, they do not appear to influence HR significantly. Results also indicate that vegetation and urban porosity are crucial in both in reducing LST and improving HR during extreme heat events. This study highlights the importance of 2D and 3D urban form features in improving LST, particularly urban HR to extreme heat events.

Citations


Key Words: Climate change, Urban resilience, Urban form, Extreme heat event

MAINTAINING ECOSYSTEM SERVICE MARKETS: NAVIGATING BETWEEN PARTICIPATION, LEGITIMACY, AND EFFICIENCY
Abstract ID: 1348
Individual Paper
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This paper investigates the stability of ecosystem service markets. By analyzing two regional ecosystem service markets as land use planning institutions, this research project assesses the tradeoffs between participation, legitimacy and efficiency in the maintenance of environmental credit trading schemes. The research question the paper answer is how these institutions are maintained. First, to explain some of the enthusiasm for the idea of creating these markets, this paper will briefly review why market and market-oriented approaches to
environmental regulation have gained so much traction over the past few decades. Secondly, the paper reviews some of the main theoretical perspectives on why ongoing support for these institutions has been difficult to secure in practice. The third section of this paper analyzes two efforts to develop markets in the United States, namely the Willamette Marketplace and the Chesapeake Bay Bank. These two projects, while similar in their vision of how an ecosystem service market should function, have been based on very different approaches to seeking support and ongoing participation. Using a mixed-methods approach based on semi-structured interview, document analysis and mapping of market-based ecosystem restoration activities, the analysis traces the creation and maintenance of these institutions. The analysis of participation in these two market-creation efforts is based on 50 semi-structured interviews with the people involved. In addition, I have analyzed the available minutes, reports and outcomes of both efforts to create an ecosystem service market. In addition, this paper includes an analysis of restoration activities in 6 jurisdictions in Oregon under the standards developed through the Willamette Marketplace. The fourth and final section of the paper suggests that the two efforts to create ecosystem service markets used markedly different approaches to participation. The Willamette Marketplace was the result of a clearly defined negotiation process, facilitated by a professional neutral. The outcomes of that process are not exactly in line with the hopes and expectations of the proponents of ESMs, but did include a broader acceptance of, and familiarity with, ecosystem-based trading strategies to achieve regulatory goals. More than a decade after these negotiations took place, six jurisdictions in Oregon continue to use elements from the Willamette Marketplace negotiation process to guide and evaluate some their mandated environmental restoration activities. The Chesapeake Bay Bank, while based on a very similar vision of what an ESM ought to look like, designed a participation process based on a more traditional view of regulatory implementation, which ultimately did not result in funding for restoration activities. These divergent outcomes cannot be solely attributed to the differences in process design between the two market-creation efforts, but they do suggest specific challenges and opportunities for the creation and durability of ecosystem service markets.

Citations


Key Words: ecosystem services, environmental markets, trading, water quality, restoration

SMALL AREAS, BIG STORMS, AND MIGRATION TIDES: BUILDING A HIERARCHICAL CLIMATE-RELATED GRAVITY OF MIGRATION IN THE GULF OF MEXICO REGION

Abstract ID: 1353
Individual Paper

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Central Theme: Climate-driven human displacement is a topic of great interest in the context of adaptation planning. Existing migration studies have mostly been conducted at coarse spatial and temporal resolutions. The lack of fine-scale migration studies limits the ability of planners to make informed decisions regarding climate vulnerability, especially among socially disadvantaged groups, which may migrate away from one hazardous area into another similarly exposed location. The effects of events such as Hurricanes Katrina and Maria varied greatly for different neighborhoods based on socio-economic vulnerability and underlying risk exposure. These events also changed migration patterns. To plan for the needs of different communities and climate risks within and among metropolitan regions, we need to understand how flood and storm risk exposure impact migration, how storms change these patterns, and how they differentiate at both the regional and the neighborhood levels. Our work empirically models how disaster events have influenced migration in the Gulf of Mexico since 2000 at the neighborhood level, and provides estimates of how migration patterns relate to environmental, demographic, and economic variables, and how exposure to disaster events affects these patterns.

Approach and Methodology: Our study uses a micro-level consumer data set of individual address locations that allows building a geographically specific monthly “gravity” migration model in response to the localized effects of storms. Specifically, our model measures how climate disasters (tropical storms, and floods) from 2000-2020 impacted Census tract level migration, and what factors influence these migration patterns. We demonstrate the integration of multiple datasets needed to construct longitudinal fine-scale models, including data on disaster declarations (FEMA Disaster Declarations), flood exposure and coverage (NFIP Claims), risk exposure (Flood Factor), and migration flow patterns (consumer reference data). We also model the effects of regional conditions at the commuting zone level, to understand how questions of risk and socioeconomic status at the neighborhood level interact with patterns of inter-regional and intra-regional migration, which are largely driven by community size and economic growth.

Meaningful Findings: Other models at the local level have not included migration flows, and those models that do focus on flows are often yearly and at the county level (e.g., Fusell 2018), or build on specific snapshots, not a comprehensive storm history (e.g., Acosta et al 2020). The results of our model present unique estimates of the effects of climate events on areas differentiated by underlying flood risk, and socio-demographic factors, such as race and income. We will demonstrate how socio-economic status, and underlying static environmental risk differentiate migration flows in the Gulf of Mexico region, and how exposure to hurricanes and flooding affects these patterns both in terms of short-term moves and longer-term return migration.

Relevance and Implications: Coastal communities face unique hazards and are areas with the highest population densities in the country. These populations are continuously exposed to disasters from flooding and tropical storms. However, the risks posed by environmental hazards, and thus from climate change, vary greatly within metropolitan regions at the neighborhood level, especially in terms of flood hazard exposure and vulnerability driven by socio-economic factors. To better plan for climate change, and invest in adaptation and mitigation strategies, planners need to understand how these factors impact population shifts, and how major disasters impact different groups and areas differently. Our study will provide a unique spatially and temporally longitudinal view of climate-related migration in the Gulf of Mexico region over the last 20 years, which can inform how coastal and adaptation planning addresses questions of communities with different levels of underlying flood risk, socio-economic vulnerability, and exposure to extreme events.

Citations


Key Words: Migration, Big Data, Climate Change, Disasters, Environmental Hazards

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**Track 4 Research in Motion (RiM)**

**RETHINKING EQUITY AND JUSTICE CRITERIA TO ACCESS CLIMATE ACTION PLANNING IN CANADIAN CITIES**

Abstract ID: 37
Research in Motion (RiM)

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Cities are rapidly developing climate action plans (CAPs) to establish policies for reducing local contributions to climate change, and to identify strategic actions to help communities respond to climate disruption (Boswell et al., 2012). CAPs can advance urban justice by tackling socioeconomic and environmental disparities, but for progress to occur climate actions must be grounded in a sound understanding of the needs and priorities of equity-seeking groups who are disproportionately affected by climate change. This Research-in-Motion presentation introduces a framework for evaluating the equity and justice of climate action plans in a sample of Canadian cities. The presentation addresses the following key question: Does climate action planning in Canadian cities adequately consider and address the needs and priorities of equity-seeking groups?

Several studies have refined widely accepted distributive, procedural, and recognition justice principles to develop frameworks for evaluating the equity and justice of climate action planning. Scholars have noted that efforts to address equity and justice concerns in CAPs are mainly rhetorical (Finn & McCormick, 2011), and that proposed climate actions rarely direct resources to the people or places that are most vulnerable (Zoll, 2022). Studies have also revealed that climate action planning processes are often devoid of meaningful inclusion or engagement of marginalized groups (Anguelovski et al., 2016). These studies have uncovered gaps and deficiencies in the way climate action planning operationalizes equity and justice principles, but the voices and perspectives of equity-seeking groups are notably absent from these assessments.

To date, the development of the equity and justice criteria guiding previous evaluations has been researcher-led. These studies have established a baseline understanding of how normative equity and justice priorities are embedded in climate action plans, but tell us little about the ways equity-seeking groups understand and articulate equity and justice in the context of climate change. Rather than relying on researchers to develop frameworks for assessing equity, tools that are meant to inform local policy decisions should incorporate local input to ensure that assessment criteria are accurate, representative, and meaningful in the local context (Oulahen et al., 2015).

This presentation shares findings from research that engages equity-seeking groups in the development of a framework for evaluating the equity and justice of climate action plans in Canadian cities. Specifically, the presentation focuses on the results of a ground-truthing exercise involving interviews with representatives of
equity-seeking groups in three sample cities in Ontario. The purpose of the research is to test the widely accepted justice principles and researcher-led equity criteria highlighted in scholarly literature against the knowledge and experiences of equity-seeking groups. Findings contribute to determining whether scholarly understandings of equitable climate action planning reflect local values and perspectives.

The presentation introduces a novel process for developing equity- and justice-related evaluation criteria that are community-based rather than researcher-driven. The presentation also advances participation theory by questioning the researcher-led development of previous equity- and justice-based evaluative frameworks. Building on previous assessments that have found variation in the degree to which cities operationalize equity and justice in climate action planning, this presentation offers necessary insight into the way these concepts are understood by equity-seeking groups.

Citations


Key Words: Climate action planning, Equity, Justice, Plan evaluation

SCENARIO-BASED ASSESSMENT OF ADAPTATION POLICIES REGARDING MITIGATING POST-DISASTER NEIGHBORHOOD VACANCY IN COASTAL RURAL COMMUNITIES

Abstract ID: 206
Research in Motion (RiM)

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Coastal communities in Florida are facing an escalating risk of coastal flooding and tropical cyclones due to climate change. To combat these threats, there is a pressing need for a paradigm shift from post-disaster recovery to proactive mitigation of local disaster risks. Due to lacking human and financial resources and single-sector economic dependence, rural counties are especially vulnerable to these hazards and require the implementation of effective policies for climate adaptation and disaster risk mitigation. Designing policies for climate adaptation and disaster risk mitigation in coastal rural communities relies on estimating the policies’ effect on mitigating communities’ risks to future climate and weather extremes. Scenario-based analysis and related methods have been widely used to assess the effectiveness of adaptation policies in mitigating risks posed by future climate and weather extremes. By comparing risk patterns under different adaptation scenarios, policymakers can identify measures that have the potential to protect communities from exposure to coastal disasters. However, little research has investigated the dynamics of the built environment and population development in rural communities. Furthermore, existing methods may not be suitable to model the disaster risk patterns in rural communities due to (i) lacking considering driving factors that significantly influence the spatial patterns of built environment and population in rural communities, and (ii) overlooking disasters’ disturbance on population.
growth and socioeconomic development in rural counties.

This study aims to improve the design of scenario-based methods and provide a reliable reference for the designing of adaptation strategies in rural counties by answering the following research questions (RQs):

• RQ1: How did the historical weather extremes (including high-category tropical cyclones and coastal floods) disturb the spatial distribution of LULCs in rural counties, especially the trend of neighborhood vacancy?

• RQ2: How will the rural counties’ risks to the weather extremes (including high-category tropical cyclones and coastal floods) be exacerbated or mitigated under the future scenarios considering the implementation of different adaptation policies?

We will focus on Bay, Franklin, Gulf, Jefferson, Taylor, and Wakulla County in Florida, U.S. These counties locate in the coastal area of the Florida Panhandle and are exposed to recurrent climate and weather extremes. We will answer RQ1 by training a Bayesian Network (BN) model based on the annual LULC records from 2004 to 2020. The BN model will learn the relationships between LULC change and driver factors of local socioeconomic development, neighborhood effects, impacts of weather extremes, and implementation of adaptation strategies. The trained BN model can indicate the statistical significance of the impacts of disasters and adaptation policies on the transition of LULC to vacant land. For RQ2, based on the trained BN model, we will project the distributions of LULCs and neighborhood vacancy in case counties under future scenarios that incorporate population growth, climate change, alternative adaptation policies, and the occurrence of weather extremes. This study will contribute to estimating the impacts of coastal disasters and local adaptation policies on the changes of LULCs in rural counties, which may be different from urban counties. The results can shed light on designing climate adaptation strategies that meet the demand of rural communities and mitigate local populations’ risks to coastal weather extremes.

Citations


Key Words: climate adaptation, rural communities, scenario planning

INTEGRATING LAND DEGRADATION DYNAMICS DERIVED FROM HIGH-RESOLUTION SOCIOECONOMIC DATA INTO LAND USE MODELING FOR ENHANCED SUSTAINABILITY: A CASE STUDY IN GHANA

Abstract ID: 231
Research in Motion (RiM)
Planning issue: The last five decades have witnessed unprecedented urbanization in Ghana, with its urban population increasing by more than an order of magnitude. Within this context, recent policy efforts by the Ghanaian government are aimed to ensure sustainable development and promote land stewardship. Land degradation poses a threat to environmental sustainability and severely impacts people's well-being since degraded lands may be rendered unfit for agriculture, increase drought incidence, and cause fragmented forests and damaged habitats. Land degradation in Ghana is primarily linked to charcoal production activities and artisanal and small-scale gold mining (ASM) or "galamsey," to use the local parlance. Understanding causes and consequences of these activities is central to developing sustainable land management strategies. However, it is worth noting that charcoal and galamsey activities are a means of subsistence for many households engaged in them. Therefore, if existing socioeconomic factors can be reliably linked to the densities of unsanctioned charcoal and galamsey activities, policy frameworks can be made more holistic to include potential targeting of alternative livelihoods or training in sustainable extractive activities. To do this, we need detailed estimates of socioeconomic factors at high spatiotemporal resolutions. These data, however, are not currently available in a consistent manner, especially in developing countries like Ghana.

Methodology: First, to generate fine-grained spatial resolution socioeconomic data, we will adopt and adapt an autoencoder-based deep learning algorithm that combines broad-scale socioeconomic indicators with fine-scale census information and geospatial data on environmental proxies to efficiently downscale socioeconomic indicators to the scale of village clusters. Second, since small spatial operations preclude using the remote sensing mapping strategy, we propose to build and utilize open-source unmanned aerial systems (UAS) equipped with an RGB camera and a longwave infrared thermal sensor module to detect locations of charcoal operations and galamsey. Once built and tested, the UAS could be flown in manual or automated reconnaissance to capture video feed and high-resolution imagery. Once a sizable dataset has been created, we will leverage DeepForest, a Python package for rapid classification and localization of target objects, to train models aimed at automating the identification process. Interrelationships between indicators of household socioeconomics and assets, information on migration/immigration, and physical indicators of accessibility to infrastructure and social services across a gradient of land degradation indicators (densities/risk of charcoal and/or galamsey) will be evaluated using a structural equation modeling (SEM) approach. Once causal factors that relate land degradation patterns to socioeconomic underpinnings have been established, they can be analyzed for mitigative and or restorative interventions using the Land Use Conflict Identification Strategy (LUCIS).

Preliminary findings: A preliminary test on generating probabilistic risk maps of locations conducive to charcoal production was conducted. We obtained ~90 locations of charcoal extraction activity in the study region from collaborators. To characterize landscape composition, we obtained 16-day MODIS NDVI at 250m resolution, stacked the images, and conducted a principal component (PC) transformation of the stack. Preliminary results obtained using these data produce a very promising model fit (pseudo-AUC) of 0.968 using a logistic link model within the Maximum Entropy modeling framework. As hypothesized, the size-effects of key variables confirm our hypothesis that most charcoal production activity happens in underpopulated areas, and at intermediate distances from roads.

Implications and expected outcome: Funded by the SERVIR program, a collaborative venture between NASA and USAID, this research aims to generate a body of phenomenological models that explain the complexities of issues driving rural-urban migration, land cover change and degradation, and livelihood dynamics across Ghana. Outcomes from this project include spatio-temporally downscaled socioeconomic datasets, a web-based decision-
making framework, and hands-on capacity-building workshops aimed at upskilling local personnel.

Citations


Key Words: Land degradation, Downscaling socioeconomic data, Land use modeling, Unmanned aerial systems, Ghana

CLIMATE REFUGE CITIES: FROM CONCEPT TO PRACTICE

Abstract ID: 266
Research in Motion (RiM)

TEICHER, Hannah [Harvard University] hteicher@gsd.harvard.edu, presenting author

Over the last several years, climate refugee cities, places that will be less impacted by extreme weather events and chronic stresses, have shifted from speculative prospect to concrete reality. A recent census survey revealed that over 540,000 Americans were permanently displaced due to extreme weather events in 2022. As climate migration accelerates, these numbers will also grow, and climatically more livable cities will face a growing demand to accommodate newcomers (Forsyth & Peiser, 2021; Li & Spidalieri, 2021). Some cities already see this as an opportunity and are proactively proclaiming themselves climate havens. Others are becoming destinations due to existing circumstances such as strong social networks with communities impacted by disasters (Marandi & Main, 2021).

The climate refuge concept is gaining increasing attention in popular media, policy and planning circles, and academic literature. However, the topic is so new that there has been scant opportunity for empirical analysis of how the concept of the climate refuge city is translating into practice (Ghosh & Orchiston, 2022). This research examines how the climate refuge agenda is unfolding on the ground, and how accommodating climate migrants interacts with existing racial and socioeconomic disparities framed by the overarching research question: in the first generation of climate refuge cities, why and how do cities accommodate climate-related migration? Specific questions include: 1. In a city that explicitly positions itself as a climate refuge, what are the motivating factors? Do municipal and community efforts deliver the capacity to implement this agenda? If so, what are the outcomes, enablers of and barriers to integrating climate-related newcomers? 2. In a city that has served as a de facto climate refuge, how do the outcomes, barriers and enablers compare to the explicit refuge? 3. In either case, do local efforts to accommodate climate migrants differ from efforts to accommodate other newcomers and if so, how?

This research is being conducted through case studies of two post-industrial urban areas in Central Massachusetts.
which have experienced similar dynamics of post-industrial decline and more recent growth due to immigration: the self-proclaimed climate refuge of Worcester and the de facto climate refuge of Greater Springfield where multiple municipalities have received Puerto Ricans relocating after hurricanes. The case studies primarily involve content analysis of relevant planning and policy documents and discourse analysis of interviews with municipal staff, leaders of social service agencies, non-profits, and community-based organizations (15-20 interviews per case). Interview respondents will be identified through a document review and meetings with key informants. To the extent possible, types of respondents will be matched between the two case studies. Relevant meetings that arise over the course of the research will also be included through participant observation and/or analysis of meeting minutes. Interviews will be conducted in person or via zoom, transcribed, and coded in qualitative data analysis software using a mix of deductive themes from relevant literature and inductive themes that appear in the course of the research.

The research will help to illuminate whether and how these cities that are seeking to overcome industrial decline can reconcile economic development and social inclusion (Pottie-Sherman, 2018). It will also consider how the needs of newcomers interact with existing processes of neighborhood change and more specifically how existing dynamics of displacement are affected by the population influx. In addition, it will address the persistent question of whether climate migration is distinct from other forms of migration, helping to clarify the similarities and differences between accommodating climate migrants and other newcomers. These findings will contribute to emerging conversations in scholarship and practice on how cities and higher levels of government can plan for climate migration.

Citations


Key Words: climate migration, urban adaptation, receiving communities, climate governance
lack of understanding how access to green space affects elderly individuals, an age group that is the most vulnerable to chronic diseases and the adverse effects of environmental factors such as air pollution (Di et al., 2017). Green spaces are critical in offering restorative and therapeutic potentials for older adults (Finlay et al., 2015) and also regulating local climate conditions. The positive impact of green spaces on the health of older adults must be studied. In addition, to further the “just green enough” concept (Curran & Hamilton, 2012), it is necessary to conduct population-based research that examines green space distribution across different socio-demographic groups, in order to identify any potential inequalities. The current study aims to investigate the associations among socioeconomic status (SES), access to green space and mortality rates of older adults (65 years and older) residing in U.S. metropolitan counties.

Methods: This study analyzed a sample of 1157 metropolitan counties within the contiguous United States. Access to green space was measured as population-weighted distance to recreational parks within 200m, 400m and 800m buffer zones. Mortality was measured as all-cause mortality and five cause-specific mortality rates including chronic lower respiratory disease, diabetes, disease of heart, malignant neoplasms, and cerebrovascular disease among older adults aged 65 and above. Quantile regression models were conducted to determine the interrelationships among socioeconomic backgrounds, access to green space, and mortality rates for counties. In addition, other confounding variables such as environmental factors (air pollution, temperature, humidity) and healthcare resources (number of hospitals, hospital beds and physicians) were incorporated to control for potential association distortion by them.

Results: The study results indicate that, within a buffer of 200m, several SES factors, including race, median household income, and education attainments were significantly related to access to green space. Access to green space was significantly related to deaths from all-cause and chronic disease. Other covariates, such as temperatures and availability of hospitals were also identified as significant factors that can influence mortality. Similar findings were observed at a 400m and 800m buffer zone, where all types of mortality were significantly associated with the access to green space.

Discussion: This study highlights the influence of socioeconomic backgrounds on green space access across metropolitan areas in the contiguous U.S. Overall, the findings indicate that green space plays an influential role in mitigating mortality rates of older adults. The findings of this study have important policy implications for green space planning and design approaches and underscore the importance of ensuring equitable and inclusive access to green spaces for all members of society.

Citations


Key Words: green space, mortality, inequality, socioeconomic status, older adults
THE ROLE OF WASTE SEGREGATION IN SUSTAINABLE URBAN AGRICULTURE IN CITIES OF THE GLOBAL SOUTH
Abstract ID: 362
Research in Motion (RiM)

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Recruiting research assistants (RAs) to aid with qualitative data collection, particularly in cross-cultural research settings, can be rather overwhelming; especially for early-career researchers and university students that have had minor (if any) previous experience outside of the communities they have studied and/or lived. It is essential that researchers are thinking through the cultural contexts that profoundly shape their work; specifically the insider-outsider dynamics and positionalities present between researchers, RAs and the targeted participants. There is an absence of social science literature for students and early-career researchers that depict how to navigate these unique processes and relationships, whilst maintaining inclusivity in research practices. This work draws on the experiences of a doctoral student recruiting and working with RAs and research participants in a cross-cultural project in Lagos, Nigeria; whilst balancing unique insider/outside dynamics as a Nigerian woman who has never lived or studied in Nigeria. It will explore the benefits and challenges of working in instances where the primary researcher has to balance ‘insider’ (from a racial/cultural standpoint) versus ‘outsider’ (from an institutional/academic standpoint) complexities in order to achieve research objectives.

The cross-cultural study’s overall research question asks: What is the political and socioeconomic feasibility of implementing a household organic waste segregation initiative in support of sustainable urban farming in Lagos, Nigeria? Using interviews with local policymakers, urban farmers and homeowners, this project focuses on the political and socioeconomic implications of planning an urban farming initiative as a green infrastructure strategy that harnesses food and organic waste to aid in reducing overall solid waste production and improve urban food security in municipal districts of Lagos, especially for the urban poor and other vulnerable communities. Anticipated outcomes will include the varying viewpoints of these targeted populations in determining whether they deem waste segregation practices to be beneficial in improving their overall access to locally produced foods, whilst diverting the amount of waste sent to local dump sites.

Citations


Key Words: Positionalities, Fieldwork, Food security, Waste management

POTENTIAL FOR CLIMATE EQUITY: INTEGRATING DRAINAGE WINDS INTO HEAT MITIGATION STRATEGIES IN PORTLAND
Abstract ID: 450
Research in Motion (RiM)

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Limited adaptation options to respond to high nighttime temperatures have increased the need for effective and equitable cooling strategies. In addition, urban trees, recognized as a traditional local-scale mitigation measure, are unevenly distributed across the city and less effective at night. Therefore, additional city-scale measures to alleviate nighttime temperature while considering climate equity are required. I suggest cold and dense air blowing from surrounding high landscapes, called drainage winds (Sievers and Kossmann, 2016), as a potential nocturnal mitigation measure that can moderate the spatial disparities in mitigation capacity due to the unequal distribution of urban trees in Portland, Oregon.

This research assumes that drainage winds reduce the summer nighttime urban temperatures (Grunwald et al., 2020, 2019; Sachsen et al., 2013). I set two research hypotheses to test the potential of drainage winds as an equal mitigation measure: (1) Urban development influences the flow of drainage winds, and (2) Socioeconomically vulnerable neighborhoods that typically have less canopy coverage have a greater cooling effect from drainage winds. I first use a two-dimensional numerical model KLAM_21 developed and maintained by the German Meteorological Service to simulate spatiotemporal distributions of cold air generated and transported based on different surface elements. In the simulation analysis, I use grid cells of 30 m with elevation values and past and recent land use types across the simulation area (45 km × 45 km, including Portland). Then, I conduct statistical analysis to analyze the correlations between the proportion of canopy area, socioeconomic variables, and simulated wind attributes based on census block groups within Portland (n = 435).

The simulation results generally agree with the observed wind profiles from meteorological stations located under the urban canopy layer, indicating the applicability of KLAM_21 in the real world. By comparing past and recent wind conditions, I show that urban development over the last two decades reduced the overall level of drainage winds in Portland. Lastly, a marginalized neighborhood with a lower canopy area has greater cooling effects from drainage winds. Overall, this study confirms the potential of drainage winds as a mitigation measure that can moderate existing disparities in the cooling capacity of tree canopies in Portland. Scenario-based simulated wind information should be integrated into mitigation strategies to create a more equitable nighttime thermal environment in the long term.

Citations


Key Words: Drainage winds, Tree canopy, Climate equity, Urban landscape, KLAM_21

MULTI-TEMPORAL MANAGEMENT STATUS ASSESSMENT OF URBAN PUBLIC OPEN SPACES USING SATELLITE IMAGES AND DEEP LEARNING TECHNOLOGIES

Abstract ID: 635

Research in Motion (RiM)

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Public Open Spaces (POS), such as urban parks and squares draw enormous attention for their positive implications such as promoting public health, mitigating air pollution, and minimizing impacts of climate changes (Brander & Koetse, 2011). In fact, providing universal access to safe and inclusive green public spaces is one of the main targets of United Nations Sustainable Development Goal (Goal 11, Target 7). Despite the growing interest and relevant research regarding effects of urban POS, comparatively few studies have focused on the management aspect of these spaces. To provide citizens with urban POS in better quality, effective management and monitoring are crucial, since inappropriate management might result in negative consequences. For example, excessive tree canopy density would threat users’ safety by blocking the sights and may spread pathogens to neighboring trees (Marciulyniene et al., 2017). Defoliation of trees and lowered biodiversity are also the examples. In order to prevent and deal with these matters in a timely manner, it is important to efficiently monitor urban POS management status and take appropriate responses if needed. Currently, the most commonly used method for such monitoring is field survey, which require high level of time and cost. Some improved methods use satellite images, however, even these methods rely on visual inspections (Edwards et al., 2013), which is still imprecise and time consuming.

Against this backdrop, we attempt to introduce a novel approach for remotely and automatically evaluating management conditions of urban POS in the city of Seoul, South Korea, using high-resolution satellite images (PlanetScope) and state-of-the-art deep learning image classification algorithms. This process comprises two parts, first, in order to understand vegetation quantity and land use status of urban POS, we distinguish vegetation and non-vegetation area through U-Net and DeepLab V3+ architecture, which are proved to be effective in various image segmentation tasks. Multispectral bands in addition to visible spectral bands (RGB) of the imageries are used for segmentation process to enhance accuracy (Osco et al., 2021). Second, management conditions of each POS are monitored based on the segmentation results, using temporal analysis of various vegetation indices extracted from the imagery. This two-stage approach would allow us to explore the management status reflected on the land cover features and vegetation quantity and quality. In particular, several indicators such as tree canopy densities, vegetation vigor and various vegetation indices are monitored. Tree canopy density is an important barometer that shows how well trees in urban POS are pruned, vegetation vigor extracted from various multispectral bands (Cârlan et al., 2020) might explain users’ satisfaction and peripheral microclimate. Such findings would provide valuable information regarding urban POS for both practical applications and future studies.

Citations

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In response to increasing public consciousness about historic and ongoing Black and Indigenous land dispossession in the United States, land is now actively being given back to Indigenous communities and Black families through a variety of transfer mechanisms by private and public actors. These actions serve as an opportunity to think deeply about the reparative capabilities of the U.S. property system: Can a system designed to take land ownership opportunities away from Black and Indigenous people realistically give it back to them?

The concept of property is deeply implicated in indigenous erasure and racial subjugation and, because of this, cannot wholly serve as salvation. Indigenous sovereignty and Black liberation movements focused on land call for transformative justice that would not only redress past wrongdoings and refrain from perpetuating further harm, but also liberate relationships with the land that have been systematically suppressed. Serving as ‘proof-of-concepts’ are Black, Brown and Indigenous-led land stewardship projects across the country that challenge the concepts of land as property, creating new ownership and stewardship arrangements that reestablish and reinvigorate relations between dispossessed people and dispossessed people and the land.

Progress during the transition phase is being made by manipulating the tools at hand to demonstrate what the future could look like, particularly tools such as land trusts and easements. Using the bundle-of-sticks conceptualization of property rights, the different ways our shared outdoor spaces are owned and managed ‘unbundles those sticks’ and allows them to be held by multiple parties, which opens up a broader conversation about the sharing of decision-making power. Lesser attention has been paid to how the larger trend of devolution within land conservation may also result in more socially just outcomes in the North American context.

On July 20, 2022, Los Angeles County returned two blocks of beachfront property that is now a public park to the ownership of the legal heirs of Charles and Willa Bruce, a Black couple who owned and operated a beach resort on those very parcels in Manhattan Beach, CA in the 1920s. This case study will demonstrate how the existing property structure was altered with the specific intent of redressing Black land dispossession. Archival data, in the form of grey literature and news articles, will outline the procedural steps that were taken to transfer ownership of Bruce’s Beach from Los Angeles County to the Bruce descendants. A bundle-of-rights analysis will reveal what property rights were restored, what restrictions still remained, and how this relates to a larger debate about how devolution contributes to both environmentally and socially just outcomes. Serving as a noteworthy case of land-based reparations, Bruce's Beach can illustrate one pathway to restitution within the open space realm.

Citations


Key Words: reparations, open space, land conservation, bundle of rights

"REFLECTIVE" DATA AND PLANNING TOOLS TO ADDRESS CLIMATE, RACIAL JUSTICE, AND SUSTAINABILITY IN THE CITY
Abstract ID: 656
Research in Motion (RIM)

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How can we co-create planning tools to better address climate, racial justice, and sustainability that genuinely meet community needs? As a part of a National Science Foundation- Smart and Connected Communities Planning Grant, our team has been working with community groups in Philadelphia to develop community engaged planning tools for environmental justice and climate resilience. Our project, Planning for Resilience and Equity through Accessible Community Technology (PREACT), works with residents to collect, develop, and advocate for environmental and climate justice through storytelling, low-cost environmental monitoring, education, and advocacy. PREACT aims to help residents articulate what they want to see in their communities through locally generated data combined with community narratives. The goal is to create a platform where communities can assess their needs and more equitably direct future city investments and resources, particularly around climate resilience.

Our research team expected that PREACT would primarily focus on developing data tools that “help” communities. However, during our Planning Grant, the focus of PREACT has been on learning humility and amplifying community frustration and voice. We identified an ahistorical approach, the digital divide, lack of community trust in government and academia, a focus on quantitative big-data rather than local qualitative data, and the siloed nature of urban policy-making as barriers to the more intersectional data generation and policy work necessary for climate resilience planning (Author et al., 2022). Communities do not always want the data and help and “technology” that researchers are offering. They often distrust researchers and big government datasets. They may feel traumatized and disempowered by yet another map that shows disinvestment and urban heat islands without also offering solutions. In Philadelphia, residents are tired of seeing the same map! Instead, they may need researchers to play different roles (often as advocates) and think more holistically about the politics of “expertise” and development of “planning tools” (Davidoff 2020). Recognizing the limitations of designing and developing planning tools with data requires a type of “reflective practitioner” and “deliberative practitioner” style thinking (Schon, 1984 and Forrester 1999). As we partner with community organizations to build and use PREACT, we are rethinking what “accessible community technology” really means. Who is it for? What will it do? Who will use it? What outcomes will it generate? How can data elevate, educate, and empower? We are also exploring how we can use data, education, and advocacy to imagine, envision, and create a just and climate ready city that serves as an alternative to the “growth machine” trap (Molotch 1976). Importantly, PREACT needs to help offer solutions and alternative visions for what communities need for climate justice. Developing this type of intersectional and “reflective” planning tool is challenging. The insights from our PREACT process can provide lessons for the development of other community data and “advocacy planning” tools.

Citations

The formal and informal actors working towards Cincinnati’s sustainable future have converged on the issues of climate change as the underlying raison d’etre for environmental interventions. This stems from the 2018 Green Cincinnati Plan couching all environmental, and many community development needs, in climate action initiatives. The 2023 update of this plan adds an emphasis on equity and inclusive collaboration, which opened the door for our research and partnership with key environmental planning agencies in Cincinnati (the Office of Environment and Sustainability and Green Umbrella).

Literature on urban environmental governance highlights the need for cities to address climate change across scales (DiGergorio et al 2019) and a key ingredient is collaboration. Collaborative responses to climate change permit organizations to tackle the cross-scale and cross-issue nature of climate change impacts more efficiently and effectively (Sayles and Baggio 2017). However, successful collaboration also requires a robust understanding of the organizations and relationships currently involved in addressing climate change – what we call a “climate network” (see also, Cunningham et al, 2016). Within this loosely defined and informal network we want to know: What organizations exist in Cincinnati that address climate change? How is the Green Cincinnati Plan used? What ties exist between these organizations and how does their work intersect? And what barriers, challenges, and opportunities exist in creating collaborative relationships and implementing climate action responses?

Our in-progress research has three phases:

1. **Network Mapping**: Identification and development of knowledge of individual organizations and basic characteristics of the network. This phase is completed. Our findings suggest that while many individuals and organizations are, to varying degrees, aware of the actions of other organizations and individuals, the climate action landscape of Cincinnati has become increasingly complex and fragmented, resulting in isolation for some organizations and missed opportunities for others. We have identified both a spatial and socio-economic component to these characteristics.

2. **Social Network Analysis**: Identification and quantification of functions, ties, and other types of relationships within the network. This phase is currently being piloted and preliminary analyses will be presented. In our analysis of network structure, strength, and flows of various kinds of capital, we will identify gaps and opportunities for a more equitable and robust network (Bixler et al 2020).

3. **Reflexive Network Model Building**: Engagement of the organizations in reviewing the research results together to reimagine an improved and broadened network. This phase will happen in early 2024, after the conference. We will give processed data and findings from Phases 1 and 2 to the participating organizations, as well as other organizations discovered through the research process. Collaborative opportunities will be organized for everyone to envision a strengthened network and action items leading
to more equity, viability, and effectiveness for this emerging formal-informal Climate Network in Cincinnati.

Public sector and private-public sector agencies, activist groups, and community-based groups have taken up some of the initiatives towards meeting the Plan’s goals. Our study is striving to inform the planning field’s discussions on the strengths and weaknesses of current climate action implementation and how to better activate linkages among planning, implementation, and resources as we move forward in addressing climate change.

Citations


Key Words: Climate Action, Equity, Collaboration, Social Networks

THE IMPLICATION OF NEW TOWN DEVELOPMENT ON CARBON SINK: A CASE OF SEOUL METROPOLITAN AREA (SMA) OF SOUTH KOREA

Abstract ID: 730
Research in Motion (RiM)

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Reducing deforestation and conserving land-based carbon sinks are essential for achieving carbon neutrality by 2050 to keep global warming below 1.5°C as per the Paris Agreement (International Energy Agency 2021). Ensuring the effective preservation of land-based carbon sinks requires a comprehensive assessment of the carbon sink capacity of existing land cover types such as forests, wetlands, and grasslands (Han, Daniels, and Kim 2020). In the US, the United States Geological Survey (USGS) performed the carbon sink assessment for the entire continental US in 2013 (U.S. Geological Survey 2013). Subsequent studies provide more detailed analyses of the carbon sink effectiveness of specific land cover types such as forestland (US Department of Agriculture Forestry Service 2017; Bustamante et al. 2014, Kim and Daniels 2019), farmland (Pape et al. 2016; Bai et al. 2019), marsh (NOAA Fisheries 2021; Dahl 2011; Nahlik and Fennessy 2016; Howe, Rodriguez, and Saco 2009) and meadows (Pendall et al. 2018).

While the existing research on land-based carbon sinks is predominantly US-based, research on the subject is quite falling behind in Korea. To combat climate change, the Korean government has set strategies to achieve carbon neutrality by 2050 which includes reducing GHG emissions through forest preservation and afforestation (Ministries of Korea 2018). Existing research on carbon sinks in Korea mostly focused on urban parks (Kang 2021, Ahn et al. 2011, Kim et al. 2010, Park and Jwa 2009). To our knowledge, no research has comprehensively assessed the carbon sink capacity of current land cover types for the entire nation accounting for the unique vegetation, soil
types, and local climate.

Because carbon sinks such as forests and grasslands in exurban areas are often subjected to new developments to accommodate population growth, it is important to analyze their impacts on land-based carbon sinks. Han, Daniels, and Kim (2022) suggest that well-preserved carbon sinks via greenbelt programs in the US contributed to much less loss in carbon sinks while promoting more compact developments in six metropolitan counties in the US. Considering the implications of developments on carbon sinks, we seek to analyze the impacts of large-scale development projects on carbon sinks in Korea.

Between 2010 and 2021, several large-scale New Towns were built near the Seoul Metropolitan Area (SMA) to accommodate the population growth and address the housing affordability problems of the region. Since 2019, the Korean government is developing 3rd phase of New Towns in the area which will add 176,000 housing units on 3.2 million m² (7,900 acres) just outside the City of Seoul. In this study, we analyzed the land cover changes along with carbon flux and stock based on Soil Organic Carbon (SOC) map to assess the impacts of developments on carbon sinks. Our preliminary findings show that 2,855,400m² of forestlands were lost to development, resulting in a loss in carbon absorption capacity of 4.5 kilotons total. Based on this finding, we plan to conduct a regional scale assessment of the carbon sink lost to the New Town development projects in the SMA.

Citations


Key Words: Carbon Sink, Regional Planning, Urban Growth Management

PLANNING FOR BIOSOLIDS: AN EXPLORATION INTO URBAN GROWTH, ENVIRONMENTAL JUSTICE, AND COLLABORATIVE OPPORTUNITIES

Abstract ID: 775
Research in Motion (RiM)

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The purpose of this study is to evaluate how local governments are collaborating to manage wastewater residuals (Biosolids) in Florida and promote environmental justice in planning efforts. The need for this study arises due to the accelerated growth observed in the state of Florida. Specifically in coastal communities. As populations rise and cities run out of space, wastewater managers are finding it more difficult to dispose of human waste and biosolids. Landfills are reaching capacity and some communities have established local regulations that restrict the disposal of biosolids onto land and into the environment.
Rural communities have become the new recipients of city waste through the land application of biosolids on farms, and there is controversy over the environmental and public health costs and benefits associated with this process. Various health concerns have been raised, and some studies are linking degraded waterbodies to the land application of biosolids in rural communities. There are also studies describing ‘forever’ chemicals known as PFAS in which there is limited information to establish regulations. On the other hand, several studies describe the potential benefits associated with this process in terms of agricultural production and lowering the use of synthetic fertilizers. Overall, the costs associated with the land-application alternative are low compared to other options such as developing new technologies or landfills. The agricultural sector also benefits by saving on fertilizer costs. Although, there is a possibility that the long-term social and environmental costs can outweigh the short-term economic gains. A more sustainable and equitable approach is needed.

Spatial analysis is being conducted with the use of Geographic Information Systems (GIS) to evaluate sites of pollution and demographic indicators associated with environmental injustices. Document analysis and interview data will be used to assess collaborative efforts and limits to equitable processes that promote environmental and human health for both rural and urban communities.

Environmental Justice Literature related to biosolids emphasizes collaborative processes focused on local control and/or consultation since there may be issues of marginalization in regional politics during the planning and siting stages of development. However, current planning processes in Florida are largely driven by the state environmental protection agency, local governments involved with managing the wastewater treatment facility, and farmers that manage the land application sites. Much of the data evaluated thus far does not indicate participation from local residents in both urban and rural communities and there is limited information highlighting collaborative processes taking place between local governments across the region. This is limiting opportunities to identify diverse stakeholder perspectives as well as the knowledge, skills, and resources that can be leveraged through established networks.

Research shows that most complex problems manifest at multiple spatial, temporal, and organizational scales, and their nested and emergent properties cannot be resolved by a single collaborative. For problems like these, it is important to build communities of practice and promote collaboration synergistically to develop new technologies, plan more efficiently, and obtain a better understanding of diverse perspectives and solutions for equitable biosolids management. This involves inviting, assembling, and incentivizing potential participants by initiating leaders from above or through the grassroots level. Overall, collaborative efforts that emphasize inclusion and focus on the social, economic, and environmental aspects of the problem with biosolids management are more likely to identify sustainable and long-lasting solutions.

Citations

- Tsang, R. et al. (2020). Developing a sustainable biosolids program through a comprehensive, collaborative approach for Arlington County. Water Practice & Technology (15) 120-129.

Key Words: Biosolids, Urban Growth, Environmental Justice, Collaboration, Innovation
A TALE OF ENFORCING HAZARD-INFORMED LAND USE: THE CASE OF REBUILDING FROM THE 2018 CENTRAL SULAWESI EARTHQUAKE AND TSUNAMI

Abstract ID: 776

Research in Motion (RiM)

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With the impact of climate and geological instability, governments worldwide are increasingly supporting land management through buyouts, managed retreats, and zoning to reduce potential hazards in the hope of building resilient communities (UNDRR, 2020). Researchers also address the importance of using hazard information in land use planning to reduce hazard impacts (e.g., Schwab, 2014), and this momentum increases, especially after disasters. However, in actual post-disaster examples, this attempt to regulate land use is often unsuccessful, especially in the global South (Pardede & Munandar, 2016). Some reasons include the limited availability of accurate hazard data and information (Iuchi et al., 2023; Stein et al., 2012); others include simplified policies, programs, and processes that do not accommodate the needs of the residents.

This paper revisits issues upon implementing hazard-informed land use from an actual recovery example. The targeted area is the PASIGALA region in Central Sulawesi, which was stricken by an earthquake (2018), followed by an unusual geophysical phenomenon of a tsunami, (undersea) landslide, and flow-liquefaction, killing thousands of people. A regional hazard map was developed to decide on land use in three months with little time to update scientific information (Iuchi et al., 2023). Rebuilding began with this map to reduce potential hazards by relocating people but minimally considering indigenous knowledge and lifestyles. Five years into recovery, governments continue to discuss hazard-informed land use, yet the actual rebuilding narrative concerning land use enforcement is untold. In addition, people are found to be living in the area designated as hazardous. Understanding how this situation developed will help identify issues of hazard-sensitive land management.

We analyzed information collected during a two-week exploratory fieldwork trip conducted in February-March 2023. To understand the overall status of hazard-informed land use decisions and enforcement, we interviewed national and local government officials in Jakarta and Central Sulawesi. We asked about details of hazard maps, the status of land use zoning, and updates on community relocation. At the same time, we observed the development status on the ground in areas designated as hazardous and relocation sites. To confirm their emerging issues, we informally communicated with residents on-site and consulted scholars from universities and local NGOs.

The result suggests that, first, uncertainties on hazards continued to be the central discussion among the national and local governments upon adapting land use measures. While national governments continued underscoring the need to scale up the hazard levels, local governments relied heavily on the initially adopted hazard map in their plan because strengthening land use restrictions meant more costly investment and thus were unrealistic. Second, local governments identified their need to adjust for more flexibility in restricting land use, especially with the red zone areas (zones restricted to occupy). When putting relocation into practice, many indigenous families were found unregistered with the government’s land management system. Facing these realities, governments are currently examining exemptions for some communities to continue living in the red zones. In sum, this narrative suggests that land management to reduce hazards is easier said than done; in reality, societal and cultural arrangements are much more nuanced than the land management system designed for efficient administration.

Citations

A TALE OF TWO SCALES: A CENTURY OF LAND COVER CHANGES IN SOUTH FLORIDA

Abstract ID: 967
Research in Motion (RIM)

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This presentation examines 100 years of land cover changes in South Florida and Miami-Dade County, under the lenses of environmental history, urban and environmental planning, trying to address the question of what mix of factors (including hydrology, vegetation, climate, agriculture, urban expansion, encroachment, and socio-economic history, among others) have driven the current urban and regional complex landscape that we call today South Florida. Part of this history has been documented with specific urban or environmental lenses (Nijman, 2011; Grunwald, 2007; McVoy et al. 2011). A combination of geographic/spatial analysis, a quantitative, and a qualitative approach is used as a method to analyze temporal and spatial changes and levels of anthropogenic disturbance through various periods of time, as related to the development of this sub-tropical novel ecosystem. Data were integrated from historical maps, aerial photographs, on-the-ground observation (Zhao et al. 2010), and many other sources, into a GIS database for the region, and historic and current land cover and other properties were analyzed. By using maps of land categories from 1913 to recent years for several points in time, in conjunction with plot-level field data of land use, vegetation cover, woody plant diversity, and soil chemical properties, we analyzed a century of changes in this subtropical urbanized landscape. At the end, we used fuzzy scores as a measure of anthropogenic disturbance at the plot-level to analyze the legacy effects on Shannon-Wiener tree diversity indices, tree cover, and soil organic matter content. The unique contribution of this article is that it combines two type or levels of analysis into one unified framework: one at the plot level, and another one at the city/county and regional level, to tell a story in parallel at all scales. This environmental and urban history of the city and the region is positioned in the context of that of the historic Everglades wetland, where a large portion of this ecosystem has transition to urban and agriculture, in a period of 100 years. Main findings will address: a) processes of deforestation, afforestation, and shifts to agriculture generated a very unique development pattern, with various grades of anthropogenic disturbance, b) relationships between environmental, built-environmental and socio-economic variables during this history, and c) some conclusions about current situation will drive the future of the region, including topics such as resilience, green infrastructure, and others.

Citations

Climate change is rapidly increasing the frequency and intensity of climate events. In risk-prone locations, communities are often exposed to both repetitive and cascading disasters. For example, in California, many communities experience repetitive wildfires and wildfires followed by mudslides. In coastal Louisiana, communities experience repetitive hurricanes and hurricanes followed by flooding. Policies at the federal, state, county, and community level address this situation by supporting hazard mitigation and post-disaster recovery, often in conjunction. Of late, the ambit of such policies also includes resilience and adaptation to climate change. In such policy contexts, tradeoffs are inevitable between recovery and mitigation. These tradeoffs are encountered by both households and decision-makers. It is challenging to develop policy responses that help communities navigate these tradeoffs in a meaningful way. My research compares policy responses in two distinct but equally complex settings in terms of hazards and socio-ecological characteristics. I identify similarities and differences between the two settings and the corresponding policy responses.

My research objective is to compare two repetitive disaster settings to bring out fundamental similarities that can be addressed by broad policy structures and contextual differences that need to be addressed by flexible and diverse policy responses. I build on two studies to present my Research-in-Motion paper. The first is my doctoral research in coastal Louisiana, carried out from 2017 to 2021, where I examined policy responses to ongoing environmental change and repetitive disasters. The second is ongoing research on resilience outcomes of wildfire recovery programs in California. In both contexts, first, I outline the types of hazards, the history of repetitive disasters, and the social-ecological characteristics of the affected communities. Second, I identify tradeoffs between mitigation, recovery, and other imperatives in each context. Then I examine the policy responses, including hazard mitigation, post-disaster recovery, resilience building, and adaptation to climate change. I discuss how the policy responses address the tradeoffs. Finally, I set an agenda for future research to inform policies that help communities navigate tradeoffs meaningfully.

I carried out qualitative research in coastal Louisiana. I interviewed community members, planners, and academics; and conducted participant and non-participant observations in the coastal communities. Further, I carried out interpretive policy analysis to compare two significant planning processes—the Coastal Master Plan and Louisiana's Strategic Adaptations for Future Environments (LA SAFE). In California, as of writing this abstract, I am engaged in qualitative research on policy responses to wildfire risk. Using publicly available data and interviews with public officials and community leaders, I am investigating the resilience outcomes of wildfire recovery programs in Lake and Sonoma Counties. I draw upon the data from this research to undertake the comparison with the coastal Louisiana context.

Insights gathered from my research so far indicate that considerable flexibility is required in the policy regime to help communities navigate tradeoffs between competing priorities. The existing policy regime has limited flexibility. Policies prioritize specific objectives and don’t account for tradeoffs. In my paper, I will present the challenges of designing appropriate policy responses using Risk Tradeoff Analysis, a tool that I first explored in my
doctoral research. I seek feedback on my research methodology and guidance on the scope of my study.

The results of this study inform disaster risk reduction policies at federal, state, and local levels. Flexible policy regimes that are responsive to tradeoffs are more likely to be successful in reducing future risks. Further, this study will help in developing approaches to prioritize investments in resilience and adaptation.

Citations


Key Words: Environmental policy analysis, Risk Tradeoff Analysis, Disaster risk reduction, Wildfire, Coastal hazards

NOT EVEN PRESENT: HISTORICAL REDLINING INFLUENCES DISPARITY IN CONTEMPORARY URBAN THERMAL ENVIRONMENTS IN PHILADELPHIA

Abstract ID: 1077
Research in Motion (RiM)

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A high proportion of built environments contribute to elevated temperature levels, referred to as urban heat islands (UHIs). Since urban literature has reported the unequal distribution of UHIs (Chun & Guldmann, 2014) and their disproportionate impact on socially vulnerable populations (Hsu et al., 2021), urban heat issues need to be explored through the lens of climate justice. In this context, recent empirical studies have raised fundamental questions about how historical housing policies still influence contemporary thermal inequality found in multiple US cities (Hoffman et al., 2020; Wilson, 2020). The discriminatory practices of Home Owners’ Loan Corporation (HOLC) categorized neighborhoods into four color-coded rating systems mainly according to their racial composition (Best–A; Still Desirable–B; Definitely Declining–C; Hazardous–D), which transformed the landscape features through the mortgage loans or investments. For example, neighborhoods designated as higher grades (e.g., A or B) have higher proportions of tree canopy cover than their counterparts, whereas the opposite trend is found when comparing the proportion of impervious land cover (Hoffman et al., 2020). Although previous studies have identified the structured inequality of the land surface temperature (LST) and landscape features between HOLC grades, less focus has been made on comparing the spatiotemporal dynamics of air temperature at the micro-level based on the landscape features distinct between HOLC grades.

In this study, we explore how the lasting legacy of redlining affects the temporal dynamics of neighborhood
thermal environments in Philadelphia, Pennsylvania. We first examine the statistically significant differences in the proportion of tree canopy cover and building area between HOLC-graded neighborhoods by conducting the Kruskal-Wallis test and post-hoc multiple comparisons. Our statistical results reveal that A-graded neighborhoods have distinct landscape features compared to others. Based on these findings, we select two census block groups of similar size, each located within A- and D-graded neighborhoods, respectively, to compare their microclimate thermal environments via ENVI-met simulation. We set the grid cell size of two simulation models and add topographical information and landscape components (land surface, building, and vegetation). In addition, meteorological forcing is applied in the simulation process. Consequently, we simulate two thermal environments for a total of 18 hours from 12 pm on July 14th, 2018, to 6 am on July 15th, 2018.

The simulation result presents that the census block group located in the D-graded neighborhood exhibits higher air temperatures during the day but lower nighttime temperatures than its counterpart. The distinct landscape characteristics may contribute to these reversed trends. For example, the census block group in the D-graded neighborhood receives more radiation during the day due to a high level of impervious surface (higher day temperature). In contrast, the dense tree canopy cover in the census block group in the A-graded neighborhood can trap long-wave radiation and retain heat during the nighttime (higher nighttime temperature). Despite our findings about the negative effects of tree canopy on air temperature, we still emphasize the role of green infrastructure for residents living in historically discriminated neighborhoods considering the various ecological and environmental benefits that urban trees provide. In addition, the relatively low adaptation ability of marginalized neighborhoods still supports the urban trees as a cooling measure. Overall, our research indicates the need for careful tree planting strategies to effectively reduce inequal microthermal dynamics according to historical disinvestment practices.

Citations


Key Words: redlining, urban heat islands, thermal environment, thermal inequality, climate justice

PATTERNS OF DEVELOPMENT SHAPING DISPARITIES IN WEALTH AND FLOOD-EXPOSURE IN COMMUNITIES ACROSS THE UNITED STATES

Abstract ID: 1128
Research in Motion (RiM)

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Flood damage can have severe and long-term socioeconomic repercussions. Yet, building in flood-prone areas is quite commonplace, a practice that jeopardizes community structures and human lives. Previous work often has
concentrated on vulnerability and flood damage outcomes of building in locations that flood, but less research focuses on how development patterns shape the composition of populations living in the floodplain. We prod the relationship between wealth and flood risk to determine how development patterns frame who lives in the floodplain. In a nationwide analysis of floodplain development in the United States, we use real estate data to measure relationships among development pressure, floodplain housing, and exposure of high- and low-wealth populations at the residential community scale. We calculate the share of new housing in the floodplain in relation to the share of developable land in floodplain areas as a measure of floodplain development and flood exposure. Additionally, we use property values as a proxy for wealth in comparison with the share of floodplain properties in a community to evaluate how floodplain development has shaped the population in the floodplain over time. Importantly, we find that relatively inexpensive and expensive housing is most likely to be built in the floodplain compared with properties near the community’s average value. From a sample of about 10,000 communities that have at least 10 floodplain properties, we find that around 2,500 communities have more than 40 percent of floodplain properties in the bottom housing values, while around 1,900 communities have more than 40 percent of floodplain properties in the top housing values. Therefore, floodplains nationwide are more likely to contain a community’s affordable housing than its expensive housing. This disproportionate exposure of inexpensive and expensive housing deepens through time as development has steered further toward the ends of the spectrum in the most recent builds. In that context, we look at how patterns of floodplain development have changed with new development since 2000. Using our calculation comparing the share of floodplain housing and the share of developable land in the floodplain, we estimate a community’s exposure to flooding in the context of the most recent residential builds. A ratio greater than one implies that a community has disproportionately developed the floodplain, whereas a ratio less than one implies a community has limited development in the floodplain. In particular, we focus our attention on communities that have either a majority of inexpensive or expensive housing in the floodplain. Within these communities, the calculation of flood exposure yields insight into how floodplain development has proceeded in recent years and shaped who lives in flood-prone areas. Our study builds on the dialogue of floodplain development and expands the discussion to how development patterns shape who lives in flood-prone areas. Given the disparities we observe in wealth and flood exposure, measures aimed at disincentivizing development in the floodplain and preserving space for affordable housing outside of the floodplain could help to limit community flood-exposure and promote responsible, inclusive development at the local level.

Citations


Key Words: Flood exposure, floodplain development, housing value
Conflict is a hallmark of planning due to the plural values of society that coalesce in planning processes. Individual planners are key for understanding, considering, and integrating the perspectives of multiple publics to develop inclusive plans and policies. This is especially the case with environmental planning, where values and interests often clash around the development and use of natural resources, ecosystem health and well-being, and the role of government in managing the economy and protecting the environment. Collaborative planning (Innes & Booher, 2010) and transactive planning (Friedmann, 2011) are models that encourage planners to closely engage with stakeholders and members of the public to manage this inevitable discord and harness it for creative problem-solving. Yet to do this well, planners must appreciate the productive capacity of conflict and have the skillset to activate its potential.

Conflict management and collaboration trainings that teach interest-based negotiation and facilitation offer a way for practitioners to develop these skills and positively frame conflict (Susskind & Cruikshank, 1987). However, little research has evaluated the effectiveness of these trainings for improving the engagement practices of environmental planners. In an effort to lay the groundwork for studying the effectiveness of these trainings, we asked two research questions: 1) How do environmental planning professionals perceive conflict and collaboration? and 2) How, if at all, does training in conflict management and collaboration affect these perceptions and influence engagement practices?

To answer our questions, we qualitatively evaluated a six-month conflict management and collaboration training course grounded in interest-based negotiation and facilitation and catered to environmental planning professionals. Using pre- and post-course open-ended questionnaires and follow-up interviews three months after the course ended (n=15), we were able to assess shifts in trainees’ perceptions of conflict and collaboration over time, which course concepts resonated for each trainee, and how these concepts are (or are not) being integrated into each persons’ own engagement practices.

Our findings provide a foundation upon which to build a greater understanding of how training can help environmental planners positively frame and leverage conflict and collaboration with diverse stakeholders and publics to improve engagement and policy development practices. Amidst calls for “better” planning practices that acknowledge the complexity and uncertainty inherent in public policy and planning (Campbell et al., 2014), we argue a positive view of conflict is necessary to develop more inclusive planning outcomes. Though planning pedagogy acknowledges the importance for practitioners to develop robust public engagement skills, planning education rarely teaches these skills directly (Milz, 2022). Understanding the effectiveness of training for teaching planners to productively harness conflict can help to improve both planning pedagogy and practice.

Citations

Households are the largest contributor to the country’s greenhouse gas (GHS) emissions. It has been estimated that in the United States, household consumption is responsible for over 80% of the country’s (GHG) emissions. If the emissions produced during the manufacturing of imported goods are also taken into account, the percentage may increase to upward of 120%, adjusting for the carbon intensity of production. Furthermore, the households within the United States are accountable for around 20% of the annual worldwide GHG emissions, either directly or indirectly, while these households only comprise 4.3% of the total global population. In order to develop effective climate change mitigation strategies, local, state, and regional governments have paid more attention to understanding household-level carbon footprints. Based on previous research, the geographic patterns of household carbon footprints differ significantly, depending on density and the built environment. For instance, transportation consumption is the primary contributor to GHG emissions in the US, while service consumption is the leading contributor in San Francisco, which has higher density and more public transportation options than the average US city. Previous studies have also revealed that household demographics are an essential factor in household carbon footprints since different lifestyles tend to have distinct consumption patterns, which generate different amounts of GHG emissions.

The objective of this study is to comprehend the historical geography of household carbon footprints in the United States. To achieve this aim, the project initially estimates the average household carbon emissions at the census tract level from 1980 to 2020, enabling the identification of changes in the geography of household carbon footprints. This research utilizes a modeling technique that employs life cycle assessment, which is widely adopted for estimating historical household carbon footprints. The estimation results are available on our website at http://climate-maps-v2.s3.amazonaws.com.

Furthermore, the study investigates the 30 largest metropolitan areas to analyze how these areas’ carbon footprint patterns have evolved over time in conjunction with changes in demographics and urban sprawl. The research pays particular attention to the relationship between carbon emissions and race/income to determine which communities contribute more to GHG emissions and ultimately understand the significance of race and income in carbon emissions.

According to the research, transportation is the primary contributor to GHG emissions over time, despite a rapid decrease in emissions after 2010 due to increased fuel efficiency and decreased vehicle miles traveled. Additionally, households in suburban areas consume more carbon energy due to longer commutes and larger housing sizes, although the geographic concentration of high carbon usage has changed over time. The study also reveals that income and race have a strong correlation with household carbon emissions, although this relationship varies significantly across different metropolitan areas.

Currently, we are in the process of completing our data analysis and plan to publish a paper that synthesizes our
findings. This paper will present our latest and most comprehensive exploration of the historical carbon mapping with examples.

Citations

- Gioielli, R. “Mobility, Race and Climate in Postwar Atlanta,” American Studies (AMSJ), 60 (3-4), 17-42.

Key Words: Greenhouse Gas Emission, Sustainability

BUILDING INCLUSIVE COMMUNITIES FOR CLIMATE AND DISASTER RESETTLEMENT IN NEW YORK

Abstract ID: 1352
Research in Motion (RiM)

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Environmental hazards and the impacts of climate change are projected to displace millions of people globally. Many citizens and government officials alike anticipate that their regions and cities will become frontline recipient destinations for domestic and foreign “climate migrants,” and as such seek to brand their communities as “climate havens” that welcome displaced residents through strategic and equitable planning and preparation.” (Marandi and Main, 2021). Despite the recent maturation of policy pathways for resilience and climate adaptation that often include human relocation, such as managed retreat, climate mobilities are incredibly complex since environmental factors cannot be isolated from the economic, social, political, or cultural factors used to inform individual migration decisions (Ajibade, Sullivan, & Haeffner, 2020; Mach & Siders 2021). As such, how are planners at all levels of government preparing to manage the processes involved in the formation of local and regional “climate havens” and the soon-to-become “receiving” communities of climate migration?

This Research-in-Motion presentation presents ongoing research collaborations with county, local, and state government actors to begin planning for resettling climate and hazard displaced populations throughout New York State. First, the research team has conducted a literature review assessing the scope and complexity of “receiving” communities in the United States, which includes a sample of organically occurring recipient cities - those that began efforts to serve migrants from sudden-onset disasters without preparation, and conscientious recipient communities who deliberately created targeted attraction programs. The team then evaluated case studies of receiving communities to assess how economically and culturally inclusive and heterogeneous targeted resettlement projects have been. Next, our research team used this case study analysis to create a framework for identifying criteria that can be used by local and state actors to assess receiving communities’ readiness and willingness to accommodate new migrants. Finally, we suggest opportunities for including these criteria in cities’ comprehensive and local hazard mitigation plans updates.

Two critical findings have emerged from the initial research. First, local hazard mitigation plan updates offer great opportunities to identify land uses suitable for future resettlement and to improve overall community resilience through plan integration, but ultimately, state and federal policies and funding mechanisms for climate migration are needed to induce the public participation processes required for local approval to accommodate significant numbers of migrants or larger-scaled relocations. Second, climate havens have generally emerged as “niche” markets for specific groups of migrants, and thus often serve in a humanitarian capacity or inadvertently become
exclusionary in access. Planners seeking to build inclusionary “receiving” communities should immediately develop local resources before major migrations begin so that local communities possess the willingness to receive, and resources to attract, diverse migrants.

Citations


Key Words: hazards, migration, climate justice, managed retreat, receiving communities

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PATHWAYS TO A JUST TRANSITION: BRIDGING REGIONAL INEQUALITIES OF CLEAN ENERGY IN THE UNITED STATES

Abstract ID: 433
Poster

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With increasing extreme climate change events posing a threat to living creatures on Earth, decarbonization through zero emissions and electrification has become a crucial national goal. However, this transition is expected to significantly increase electricity demand, and the existing electric grid is outdated and incapable of meeting the demand spike without substantial upgrades. Furthermore, it is crucial to ensure an equitable transition, as there is a significant regional disparity in the carbon intensity of electricity production. Thus, this paper proposes short-term and long-term strategies using hydrogen to ensure a just transition for decarbonization in the United States.

To conduct this research, the study utilizes spatial analysis using ArcGIS Pro and data visualization from secondary sources. The findings suggest that regional energy disparities in electricity generation can be reduced by implementing two strategies. First, before renewable energy plants become fully operational, hydrogen can be imported, stored underground, and distributed through existing LNG ports after modification, known as “blue hydrogen,” as a short-term strategy. Secondly, in the long run, “green hydrogen” can be produced in the Great Plain States, which have the greatest geographical potential for hydrogen production using wind and photovoltaic sources, making it more cost effective and carbon efficient. The study discusses policy implications by emphasizing the importance of establishing relevant regulations and incentives in the early stages of technology development to accelerate hydrogen development. This includes policies that prioritize the equitable distribution of hydrogen infrastructure and support the development of green hydrogen production.

Citations

TREND AND SPATIOTEMPORAL PATTERN OF COMPOUND DROUGHT AND HEAT WAVES IN SOUTH KOREA: FROM A PERSPECTIVE OF THE COMPARISON WITH SINGLE EVENT AND THE LAND COVER CHARACTERISTICS

Abstract ID: 746
Poster

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Under continuous and accelerated climate change, compound events have received increasing attention in recent decades since they cause more severe environmental, social, health, and economic damages than any single event [1, 4, 5]. Compound Drought and Heatwaves (CDH) can amplify each event's negative impacts, such as heat-related deaths and illnesses, loss of crop yields, water stress, and wildfire occurrence [1, 4] and pose a serious threat to society when the damages co-occur in combination.

To manage and respond to compound climate events, we need to understand the trends and patterns of compound phenomena in regions of global areas by comparing them with a single event. Most studies have investigated CDH with low spatial resolution at the global, continental, or national scale [1-5], while studies on a high spatial resolution at the national or regional scale are lacking. Additionally, a limited number of studies perform spatiotemporal analysis enabling to capture spatial evolution throughout overall characteristics in frequency, intensity, and duration. Moreover, there is no attempt to explain the changes in the CDH with areal physical or human activity features rather than direct causality, such as land-atmosphere mechanism [2].

This study aims to detect the trends and analyze the spatiotemporal patterns of CDH by quantifying CDH in South Korea. Then, we try to find what areal features are related to the significant change in CDH regarding land cover characteristics. Through spatiotemporal analysis, we aim to determine how the characteristics of the single and compound event, including frequency, intensity, duration, and spatial extents, change over time. We use daily temperature and monthly precipitation data set from Korea Meteorological Administration for CDH quantification. The CDH was analyzed with 4073 grid cells of 5km by 5km from 1980 to 2022. Land cover characteristics by grid are computed by seven categories (Urban, Agriculture, Forest, Grass, Wet Land, Barren, Water) using data from Korea Environmental Geographic Information Service.

As a result, a significant increase in the frequency and spatial extent of CDH and heatwaves was found, except for droughts. However, we found a significant increase in the intensity of CDH with both drought and heatwaves and in the duration of CDH and heatwaves. Given the results of spatiotemporal analysis, while the frequency and intensity of droughts tend to expand from the south to the north, the heatwaves and CDH show a distinct expansion from the southeast to the northwest. When comparing the spatial pattern of single and compound events’ characteristics over five periods, droughts and heatwaves increased noticeably in the 2010s after gradual intensification. Still, CDH increased markedly in the southeast region from the 1990s and showed a pattern extinct in the 2000s and appeared again in the 2010s. Spatial asymmetry was observed by each period in the single and compound events with a different axis of asymmetry. Moreover, we found that the proportion of wetlands and water area was statistically significantly low, commonly in areas where the CDH’s properties intensified. The areas
with highly increased frequency and duration had a high ratio of agricultural areas, and those with highly increased intensity had a high ratio of urban areas.

We confirm differences between the single and compound events from that the trends and the characteristics did not appear consistently high or low in periods and spatial scope. The results highlight the increased frequency and severity of CDH and the significant areal land use characteristics in regions where the CDH has intensified. It requires considering the spatial evolution and regional characteristics of CDH for monitoring and assessing compound events. This study helps to prepare mitigation and adaptation measures for compound events at the country and regional levels.

Citations


Key Words: Compound drought and heatwaves, Drought, Heatwaves, Spatiotemporal pattern, Land cover

A GEOSPATIAL ANALYSIS OF THE EQUITREE PROGRAM TO ENHANCE GREEN INFRASTRUCTURE AND TREE EQUITY IN SAN ANTONIO

Abstract ID: 855
Poster

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Urban trees, an essential component of green infrastructure for sustainable and resilient growth, are known to benefit communities through economic, environmental, and health impacts (Nyelele et al., 2019). As urbanization continues and impervious surfaces increase, an overall reduction in green infrastructure is evident (Tan et al., 2017). Additionally, green infrastructure is often more observed in more affluent communities bringing attention to the uneven distribution across communities (Conway et al., 2022). The city government of San Antonio, Texas has engaged in free tree-planting campaign through its EquiTree program in an effort to enhance green infrastructure and tree equity within the city. To promote tree planting, the San Antonio Parks and Recreation Department has encouraged community members to receive a free tree through community events and flyer distributions. As the city expects to continue the EquiTree program, it is critical to analyze the spatial distribution of past participants across communities and address future directions of the program.

This research aims to investigate the role of the EquiTree program in enhancing green infrastructure and promoting tree equity in San Antonio, Texas. We start by questioning the status of existing tree distribution in San Antonio at the community level amid socioeconomic factors and development patterns. We then analyze the
spatial distribution of EquiTree’s past participants to identify the socioeconomic and physical characteristics of the communities where participants reside. This research is conducted in collaboration with the San Antonio Parks and Recreation Department to further encourage tree planting throughout the city and successfully promote tree equity.

To measure the existing socioeconomic and physical characteristics as well as current status of green infrastructure in San Antonio, Census block groups (n = 1,084) within Bexar County, which includes the City of San Antonio, were examined. Green infrastructure is measured with tree canopy, greenery level, and NDVI using USGS tree canopy, land cover, and Landsat 8 remote sensing data. To capture past development activities, USGS land cover raster from 2011 and 2019 are compared. These data are aggregated to the Census block group level utilizing zonal statistics in R. American Community Survey (5-year estimates) are used to obtain socioeconomic characteristics. To investigate the characteristics of program participants at the community level, we geocode EquiTree participant addresses and aggregate to the Census block group level. Finally, we analyze community-level effects of the socio-physical characteristics on the level of EquiTree participation through Spatial Durbin Error Model accounting for spatial interdependency between block groups.

The preliminary results indicate that the distribution of tree canopy coverage differs by socioeconomic status in San Antonio. Specifically, there are significant differences among income groups with respect to tree canopy coverage (p < 0.0001), where low-income and middle-income areas have 83.96% and 66.45% less tree canopy coverage than high-income areas, respectively. Difference among income groups with respect to development change is not as varied as tree canopy, but low-income and middle-income have 3.70% and 2.94% less development activities than high-income areas, respectively indicating that the low amount of tree canopy coverage in low income areas may not be due to development activities. Free tree planting was actively promoted in areas with lower income and education levels, yet more in-depth analysis is required to analyze participation patterns.

As low-income areas significantly lack access to trees, potential equity concerns exist in San Antonio. Further analysis on the past tree-planting program participants expects to identify if socially vulnerable residents require additional efforts to adopt a free tree. By analyzing the current distribution of green infrastructure and the past program participants, this study provides further insight into equitable tree planting policy especially in marginalized communities.

Citations


Key Words: Tree planting, Tree equity, Environmental justice, Green infrastructure, San Antonio, Texas
POWERING UP OUR CITIES: INTEGRATING DECENTRALIZED ENERGY SYSTEMS INTO THE MARKET. A COMPLEX SYSTEM PERSPECTIVE
Abstract ID: 878
Poster

ROZHKOV, Anton [University of Illinois Chicago] arozhk2@uic.edu, presenting author

The world is experiencing a significant shift in the energy market, driven by various factors such as access to new renewable energy sources, improved data quality, cheaper storage systems, and the decentralization of the power grid. This shift has led to more complex and flexible energy systems, presenting opportunities to address the pressing issue of climate change and create a more sustainable future. Decentralized energy systems (DES) are emerging as a viable alternative to traditional power grids. DES includes modular and flexible technologies located closer to the consumer, providing benefits such as reduced pollution and improved environmental justice (Guerreiro et al. 2010). However, the transition from massive, centralized power systems to smaller distributed sources requires a thorough understanding of the potential impacts on all stakeholders involved, including utilities, policymakers, and consumers.

This study aims to analyze and evaluate the potential impact of different strategies related to transitioning to DES for all stakeholders. The analysis is enhanced by a data-driven modeling framework, using a stock and flow diagram at the core of the model. The diagram quantifies the components of causal loop diagrams over time (Ford 1999), observing the electricity-development nexus and identifying the dynamic complexities. The model investigates the relationships between the policy, environmental, and economic aspects of DES in the urban environment, expanding the existing knowledge that mainly focuses on traditional energy systems. The system dynamics methodology, widely used as a decision support method in the energy sector (Garces et al. 2023; Che et al. 2023), is employed to study different aspects of the interrelations between energy and urban systems from a unique perspective, adding decentralized energy components to the existing systems.

The poster showcases a comprehensive analysis of the current energy market in the Northern Illinois – Commonwealth Edison (ComEd) service area, with a summary made in causal loop diagrams, system dynamics model, and geospatial analysis. The study tests five different scenarios to evaluate the potential impact of transitioning to DES on stakeholders. Scenario 1 uses real ComEd data to project trends in the region’s electricity generation based on the share of each energy source. Scenario 2 explores the densification scenario and change of urban form. Scenario 3 is based on the recently signed Illinois Climate and Equitable Jobs Act (2021), which aims to achieve carbon-free sources by 2050 through a combination of renewables and nuclear resources. Scenario 4 is similar to Scenario 3 but excludes nuclear resources, relying on renewables and other sources such as natural gas. Finally, Scenario 5 is based on transitioning entirely to renewables and battery storage after 2040, without the use of fossil fuels.

The study concludes with a discussion on how new energy components affect policies and planning strategies in urban areas and how small-scale (neighborhood level) factors are connected to the large-scale (regional and power grid level) aspects. This analysis provides a useful framework for policymakers and stakeholders to better understand the potential impacts of transitioning to DES and make informed decisions that promote sustainable and resilient urban energy systems. In sum, the transition to decentralized energy systems offers exciting opportunities to address climate change and advance environmental justice. However, it requires a thorough understanding of the potential impacts on all stakeholders involved. This study provides a valuable framework for policymakers and stakeholders to evaluate different strategies related to transitioning to DES and make informed decisions that promote sustainable and resilient urban energy systems.

Citations
• Illinois General Assembly (2021) Climate and Equitable Jobs Act (SB2408).

Key Words: system dynamics, complex systems, energy planning, climate change mitigation, decentralized energy systems

DUNE SYSTEMS ON BARRIER ISLANDS: COMPARATIVE STUDY OF DAUPHIN ISLAND AND HORN ISLAND, ALABAMA
Abstract ID: 969
Poster

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As sea level rise and the increasing frequency and intensity of coastal storm surges have become a growing concern, protecting and stabilizing protective coastal barrier islands, have gained attention and priority on both the state and national levels. Dauphin Island, a barrier island directly southwest of Mobile Bay in Alabama, has been targeted along with the natural flux of longshore currents as driving factors for chronic erosion among barrier islands (Hanley et al., 2014; Smith, 2018; Byrnes, 2010). Looking specifically at Dauphin Island, these factors have been recognized as the primary drivers of its depositional over-wash, breaching, and erosion over the past 70 years (Morton, 2008; Smith, 2018; Byrnes, 2010), yet the previous literature has not unveiled the change in vegetative cover on the over this time bracket as a possible secondary cause of erosion on the west end of Dauphin Island.

In these regards, this research finds a relationship between the growth/declination of the dune system and the progression of the developmental footprint of Dauphin Island. This study seeks to test the proposed hypothesis by employing a quantitative analysis of changes in developmental footprint, dune coverage, and net shoreline loss across a linear time regression from 2005 – 2020. The primary research method for quantifying the surface area of vegetation (dune system coverage), the surface area of development, and the surface area of net land loss, is the collection of aerial footage measured via GIS RGB quantification. The areal and topographic data resources for the RGB classification analysis are utilized from GIS databases. Then, the data is analyzed via linear regression along the set timeline to determine any relationship between the listed factors. Primary to a comparative analysis of the protective capacity of cohesive and parsed dune systems against erosion, it is necessary to establish their contribution to both the resilience and effective function of barrier island dune systems to stabilize sediment.

This study establishes the loss of dune systems as a secondary factor. If the removal or reduction of native barrier island systems via ecologically destructive developmental practices is quantifiably proven to be even marginally impactful in the increase of long-term shoreline erosion, this data will be an essential factor in the provision of effective mitigation strategies. Further, on the county and municipal levels, establishing a relationship between the loss of dune systems and shoreline erosion may provide a viable argument for the dune restoration plans, developmental restrictions, and no-disturbance ordinances for the dune systems of these communities. Thus, providing a basis for natural and ecological solutions to barrier island shoreline erosion. This research can promote additional research on quantifying the effects of green infrastructure on shoreline protection and natural disaster prevention.
mitigation.

Citations

- Douglass, S. L. (1994). Beach Erosion and Deposition on Dauphin Island, Alabama, USA. Coastal Research, 10(2), 306–328

Key Words: barrier island, dune system, green infrastructure, storm surge, Gulf of Mexico

“DID YOU CHECK ON THE CEMETERY?”: A GEOSPATIAL RISK ASSESSMENT OF CEMETERIES IN SOUTHEAST LOUISIANA

Abstract ID: 1037
Poster

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Cemeteries are non-renewable cultural resources, meaning, once they are destroyed or lost, the damage is irreversible. Cemeteries have a critical social function and are an important cultural heritage feature of society. Several cemeteries, including historical ones, are in coastal communities which are increasingly at risk from coastal hazards due to sea-level rise. To protect cultural resources, land-use planners consider historical resources in long-term comprehensive plans as they do natural resources. However, land use plans and the environmental planning cultures in southeast Louisiana incentivize oil manufacturing companies to buy contracts with the state for political, economic, and governing factors that puts cultural resources like cemeteries at-risk. In this study, we assess cemeteries in coastal parishes in Louisiana at risk from coastal inundation under three sea-level rise scenarios until 2100. Quantify the number of cemeteries at risk of inundation and identify possible differences between the demographics of the cemeteries. We use the US Census geodatabases, the National Flood Hazard Layer from FEMA, and Digital Elevation Models from the USGS to spatially analyze the location of cemeteries and low-lying coastal areas of the Gulf of Mexico. We show that of 72 cemeteries located in the study area, a majority are at risk of the 100-year flood already today. Considering the most conservative prediction of sea level rise of 1-meter by 2100, inundation could increase by more than 52% across the region, and at least 55 cemeteries are at risk of destruction, which embodies more than 76% of these indispensable and irreplaceable social assets in the county.

Citations


Key Words: Cemetery, Cultural Resource Management, Risk Assessment, GIS, Urban Planning
Given its roots in the social sciences and its lingering methodological allegiances to “concrete” forms of knowing, urban planning has neglected creative forms of making as a means of engaging the complexity, tensions and contradictions of urban sites. For scholars who work within the context of racial geographies, particularly sites of developmental harm through planning (see Goetz, et al. 2020), common methodological approaches, including descriptive statistics, suitability analysis and GIS mapping, can become, in the words of Clyde Woods, necrophilic. Woods asked planning scholars to consider their tools of inquiry, writing “Have the tools of theory, method, instruction, and social responsibility become so rusted that they can only be used for autopsies? Does our research in any way reflect the experiences, viewpoints, and needs of the residents of these dying communities? On the other hand, is the patient really dead?” (Woods, 2002:63). We also recognize that even the most critical quantitative approaches obscure the complexity of such dynamics as Black placemaking (see Koh, 2017 and Bledsoe and Wright, 2019), resistance and joy amidst and within the context of trauma. This roundtable brings together urban planning scholars who are engaged in an intellectual and artistic bricolage—the bringing together of many ways of knowing and seeing places as a way to escape rigidly theorized categorization. The participants will each share how their art and creative practice is a method of inquiry and analysis, an approach that helps us to elide problems of stereotypical analytics, incomplete archives, and immeasurable everyday experiences.

This session engages the active work of making as a means of researching and thinking through the complexity of urban planning sites and as a means of forefacing new paradigmatic commitments to anti-racism in urban planning (Williams, 2020). Organizers in this session will engage with the audience in an interactive panel discussion with dialogue occurring via a making session that focuses on various methodological possibilities (collage, bricolage, video, hybrid writing and image-text, cartography).

Citations


Key Words: methods, art, race
DIVERSITY, EQUITY, AND INCLUSION: WHAT IS HAPPENING IN OUR CAMPUSES? A ROUNDTABLE DISCUSSION FROM A MINORITY FACULTY PERSPECTIVE

Abstract ID: 392
Roundtable

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VAZQUEZ CASTILLO, Maria Teresa [Universidad Autonoma de Ciudad Juarez] ma.te.vazquez@gmail.com, participant

As several states are now putting into question the relevance of Diversity, Equity and Inclusion (DEI) initiatives in policies, many universities are now starting to limit or simply erasing such efforts. This is a strong reversal trend from previous years when most universities were openly embracing DEI policies. While this applies not only to college campuses but also to professional and academic organizations, this panel will more purposefully focus on universities.

This roundtable discussion proposal is led by faculty who have actively participated on “Diversity Councils” or on Diversity Committees” or on any other equivalent office dealing with DEI in their respective universities. All come from minority backgrounds and mainly working in majority-white institutions.

The objective of this session is to critically discuss such DEI efforts (and/or their reversals), their effect on the faculty involved, how are they being implemented, and their impact on their stated objectives. In other words, how campuses were achieving the DEI goals and how they would react to the changing climate in the state’s politics? What is happening and how are we dealing with such apparent contradiction, or reverse course?

Specifically, we propose our conversation to address these questions:

1) How are DEI policies actually being modified (if at all) specifically on planning and design programs? Are they actually being changed? Are they ingrained so ingrained in the actual curriculum, research, and engagement/service that little or no effect will be perceived? For example, have they had any impact on the way recruiting is happening? Or the value assigned to publications vs activism among faculty? Are courses in the planning and design curriculum that directly address systemic racism?

2) Who are the faculty engaged on DEI initiatives, policies and actual implementation? Have their service being valued and their voice heard? As most of them are minorities, are they “tokenized”? Is their involvement on DEI making them even more isolated?

3) Are DEI offices and policies part of a more integrated university vision of inclusion and equity? Or are they isolated with disconnected initiatives at the university level? Are the upper administration policies actually addressing systemic racism, colonialism, oppression?

Based on the actual experience of those faculty leading this roundtable, this proposal aims at sharing our experiences and learning from each other. We realized that our experiences are systematically similar, our obstacles are sometimes identical, and our progress many times is minimal. As those DEI are being re-valued at several state legislature sessions, what is going to happen? What is actually happening? We invite all faculty to listen and share their experiences from within and from outside DEI efforts. Are DEI policies relevant? Are DEI strategies impacting faculty? Are they actually promoting diverse, inclusive campuses? How is the climate in our campuses being “threatened” with these new trends?

Citations
- Where Are We Going? Where Have We Been?: The Climate for Diversity within Urban Planning Educational Programs, Journal of Planning Education and Research, 2018

Key Words: Diversity, Equity and Inclusion is Planning, Planning Education

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**Track 5 Individual Paper Submissions**

**SIDEWALK TOIL AS PERFORMANCE OF INSURGENT CITIZENSHIP**

Abstract ID: 264

Individual Paper

ALLISON, Noah [University of Toronto] noah.allison@utoronto.ca, presenting author

What do sidewalk activities reveal about belonging in socially diverse territories? This paper answers this question by examining space-claiming encounters in Queens, New York. By engaging data gathered from observations, interviews, and written materials, I achieve this by making sense of how sidewalks mobilized to sell food without requisite permits become sites to resist commercial development. In particular, I engage a citizenship lens while analyzing undocumented women’s spatial struggles against licensed vendors and Business Improvement Districts. In sum, this paper expands interdisciplinary urban scholarship by showcasing new perspectives on how cooking and selling food on the street of socially diverse neighborhoods are performances of insurgent citizenship.

Citations


Key Words: citizenship, spatial struggles, street food, business improvement districts, commercial development

**GROUP AND COLLECTIVE RIGHTS, AND URBAN PLANNING, IN QUEBEC, CANADA**

Abstract ID: 268

Individual Paper
Group and collective rights are human rights, but such rights emerge when the members of a group are discriminated against in order to protect the group temporarily or in perpetuity, depending on how long the discrimination lasts. Three conditions must be met if group rights or collective rights are to emerge (Jones, 1999; Miller, 2002): 1. All members of the group should enjoy the same rights; 2. All members must collectively value the continued existence of their group, which means that granting them a group right will help preserve the group; and 3. The shared interests supersede that of any one group member’s individual concerns, which sufficiently justifies imposing duties on group members (Agrawal, 2022). Group rights emerge when a group continues to be discriminated against. However, when discrimination comes to an end, such rights cease to exist. Collective rights, on the other hand, are permanent and continue beyond the end of discrimination against the group.

Some literature exists on how individual human rights affect municipal matters (Agrawal, 2014, 2020, 2022, 2023), but studies investigating urban issues from the lens of a group right or collective right are almost non-existent. Therefore, this present study seeks to explore the role that group and collective forms of rights play at the city level, thereby affecting urban issues, using Quebec, a predominantly French-speaking province that is one of the largest provinces in Canada by both area and population and holds a unique place in Canadian history.

The study follows Kymlicka’s (1995) rights framework that supports ethnic group demands being exempted from existing laws and regulations that disadvantage them; still, because this only calls for accommodations to existing institutions that still serve the majority, he argues that these are weak rights when compared to collective rights. For Kymlicka, collective rights emerge in the groups in which the group members are connected not only through their common experiences of discrimination but through their shared cultural, religious, or linguistic identities or heritage. He argues in particular that Indigenous peoples and Québécois are two communities that had institutionally complete societies prior to their incorporation into British North America and hence ought to have collective rights.

The data for the study was gleaned from 17 relevant pieces of case law from CanLII, an open-access online database run by the Canadian Legal Information Institute, and 25 pieces of media and news articles through Google search; also included were nine interviews that comprised of planners and human rights lawyers in public and private practice. Multiple bilingual research assistants over the years of this study took the lead in interviewing key informants and translating the interviews from French to English. CanLII allowed the translation from French to English using the Chrome browser’s built-in translator. Print news articles were mostly in English, but those in French were easily translatable using the Chrome translate function.

The research concludes that the tension between individual and group rights and the collective rights of French-Canadian Québécois and Indigenous peoples are responsible for growing discord in Quebec. Municipalities -- big or small -- in Quebec appear to be struggling to handle the demands of the Indigenous, ethnic and religious minorities living among them. The legal complexity of and potential inconsistencies between the Quebec Civil Code and Charter, and the Canadian Charter make situation more challenging. The popular sentiment against and distrust of the Canadian Charter among Quebecers further complicate municipal efforts to find solutions.

Citations

MIGRANT POLICY AND SKILLED MIGRANTS’ CITY CHOICE: A DISCRETE CHOICE EXPERIMENT ON CITY PREFERENCE IN CHINA
Abstract ID: 476
Individual Paper
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A large volume of literature has sought to understand migration and settlement patterns of migrant populations in Chinese cities, while most existing studies have focused on migrants’ exclusionary experiences due to the hukou and welfare policy restrictions by city governments. An emerging line of inquiry focuses instead on skilled migrants and determinants of their migration destination preferences. However, most studies have focused on the effects of market-based factors such as economic opportunities, which provides insufficient insights into the extent to which recent changes in migrant-related policies by city governments may shape the migration destination choices of skilled migrants.

To fill this gap, this paper examines how migrant-related policies affect city preferences of skilled migrants in China through a discrete choice experimental study conducted in June 2022. Specifically, it investigates 1) the effects of hukou and welfare policies on skilled migrants’ choice of destination cities, and 2) how these effects may differ for different types of cities. Drawing on an online survey experiment of a national sample of university students, we model skilled migrants’ city preference in China by a set of policy factors, including ease of obtaining local urban hukou, access to public education, and access to affordable housing, together with market-based factors such as economic opportunity, living cost, and amenities. We find that cities granting migrants greater access to local hukou, public education and affordable housing are more popular among skilled migrants. We also predict that, for big cities, granting migrants access to public education and affordable housing can serve as an alternative to completely removing hukou restrictions. For small cities to compete with medium cities for skilled migrants, it is necessary to grant migrants access to affordable housing and public education. This study provides empirical reference for local policy makers that hope to attract young skilled migrants, and has implication for future trends in skilled migration in China.

Citations


Key Words: skilled migrants, city preference, migrant policy, China, discrete choice experiment

INVISIBLE WOMEN IN COMPREHENSIVE PLANS
Planning gives insufficient attention to gender issues. This paper uses a mixed methods approach to explore the extent to which gender issues are addressed in comprehensive plans. In a 2019 national survey of US municipalities, 12% indicated their comprehensive plan addressed the needs of women. Using the survey data, we statistically compared communities that addressed gender with those that did not, to see which planning elements might differentiate communities that address gender.

Then we collected 80 comprehensive plans from communities which indicated their plans addressed the needs of women. We used Natural Language Processing (NLP) to examine the connections between gender and planning elements (zoning codes, built environment, services) in these comprehensive plans. We found gender was rarely mentioned or linked to planning elements. We expanded the NLP search to other identities that might capture women’s issues (children, senior, family, parenting, poverty, race, etc.). Then, we used NLP to calculate the frequency of each identity word, and paired the identity with primary planning elements (housing, zoning, transportation, public space, economic development, social engagement, and services). Of the 27,309 matches between identity words and planning elements, only 5% specifically identified women. Other identity groups (children, family, seniors, poverty, race) were mentioned far more often than women. Across the planning elements, women were most likely to be mentioned in discussions of economic development, public space, social engagement and services, and least likely to be mentioned in transportation, housing and land use.

We conducted interviews and focus groups with the Women and Planning Division of the APA to investigate the reasons why comprehensive plans might be silent on gender issues and the implications for planning practice. Our research finds the “neutral” language of planning may exclude specific attention to the needs of women. The diversity of residents, by gender, age, race, and class requires planners to explore new approaches. We also found that many comprehensive plans were out of date and did not reflect new approaches (mobilities in transportation, mixed use and complete streets in zoning, and care work in economic development). Broadening planning to address needs across the life cycle and across genders can help shift planning paradigms of land use, transportation, and economic development to better meet the needs of all residents. Comprehensive plans need to be updated to reflect these new realities.

Citations


Key Words: Gender, Comprehensive Plans, Natural Language Processing
Representatives of universities in the United States increasingly articulate land acknowledgement statements at public events. These statements recognize Native peoples as traditional stewards of local land. Rarely, however, are these statements connected to specific actions or commitments to future actions that might rectify the harms of colonization. The gap is huge between reading a land acknowledgement and engaging in actions that support #landback, a growing movement involving the return of stolen and unceded land to Indigenous peoples (Pieratos, Manning, and Tilsen 2021).

Indigenous advocates and their allies critique land acknowledgements that are unaccompanied by action as little more than a performance of equity, a performance that can delay action, intentionally or unintentionally (Native Governance Center 2021). Planners and planning scholars are part of extended discussion and debates that contribute to the intellectual, research, and activist foundations for the recent growth land acknowledgements and #landback (Jojola 2008, Porter et al. 2017). This paper aims to focus our attention specifically on #landback in the context of universities, posing and beginning to answer the question: what can academic planners do to support #landback efforts through their roles on university campuses?

This paper explores three potential avenues for planning scholars interested in supporting land justice as part of de-colonization on their own campuses. First, the paper aims to document and assess the characteristics of instances of universities returning land to Tribal Nations. As documented elsewhere, unbeknownst to most people, individual settlers, non-profits, land trusts, churches, and even governments agencies across the US have or are transferring land ranging in size from tiny plots to extensive tracts to Native nations (Lyles and Deer, under review). Examples include the return of nearly 100 acres in Northern California in late 2022 from California State University - Chico to the Mechoopda Tribe, with agreements in place to continue using the land for Indigenous-led conservation and research projects. In early 2023, the University of Minnesota announced plans to return thousands of acres of forest lands to the Fond du Lac Band of Lake Superior Chippewa (Objiwe). And, researchers at the University of Kansas have secured a $5 million grant to lead a community-engaged project to return a sacred rock to the Kanza people that was stolen, relocated to Lawrence (KS), and desecrated by being turned into a monument to settlers.

Second, the paper provides a prototype of how planning scholars might assist efforts to advance discussions and actions around #landback on their own campus. This prototype is very much a work in progress, as the authors engage in efforts the University of Kansas in this realm. It demonstrates how data and skills familiar to many planning scholars – using archival research to track the chain of land ownership over time, collecting and analyzing property data from local assessment databases, and researching innovative policies and programs from other contexts – can identifying pathways for advancing land justice on campuses.

Third, the paper explores how awareness of – and engagement in – these efforts can be part of classroom teaching, studio or workshop-based projects, and student internships. In doing so, the paper also focuses attention on foundational concepts, like the Doctrine of Discovery and Tribal co-management of land, that all planners should have familiarity with to engage in this work. It also illustrates how planning scholars can help connect foundational concepts to the types of analyses described in parts one and two of the paper. The preliminary findings offer insights of interest to scholars and practitioners alike, although the findings perhaps raise more questions than they answer.
Key Words: #landback, Indigenous, Land planning, Settler, Property Rights

A PHENOMENOLOGICAL EXPLORATIONS OF WOMEN’S ISSUES AND THE INTERNAL CULTURE OF TRANSPORTATION PLANNING

Abstract ID: 599
Individual Paper

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This research will explore the internal culture of gendered issues in transportation planning. It will address women’s experiences with traditional success milestones, in office perception of safety, interpersonal respect, and career satisfaction. In their groundbreaking paper, a Gender Agenda, Sandercock and Forsyth urge planners to look inward and challenge the culture of the field. However, the questions they posed have remained unanswered. Sandercock and Forsyth note that while women are joining the field at a rapid rate, they often join underfunded specialties and do not hold positions of power. What has changed? I seek to revisit these issues thirty years later by examining the experiences of women planners in the transportation field.

This is a phenomenological study in that it recognizes the individuality of knowledge and the legitimacy of feeling in research. Each individual experience is valuable insight into the state of the field, there is no universal truth, and every perspective should be recorded. However, there are broader and transferrable lessons to be learned from the profiles of individual planner’s experiences and stories. I will conduct 10-12 long form interviews with women who work in Transportation Planning in the Tallahassee Florida area. I will review literature on women in the planning as well as women in the workforce more broadly to inform and validate the interview questions. There will be four questions sets based on the established themes. I will work with the local Women in Transportation chapter to identify a representative sample of women professionals in the area. Participants will be chosen based on this data. Interviews will be recorded, and I will code their responses, examining them for patterns and themes.

While women’s issues in transportation are garnering more attention in research and practice, there is not sufficient research on the internal culture of gendered issues within the field of transportation planning. Before we are able to appropriately address women’s issues in transportation systems, we need to know that we have addressed those issues within our own workplaces. This research is a pilot study for a broader exploration of current gendered issues in transportation planning. The study is designed to highlight the experiences of women planners in the transportation field. A deeper understanding of these experiences could inform best practices in the field, offer strategies for navigating a male dominated specialty in planning, and guide women transportation planners when making career decisions. Lifting the voices of women planners has the potential to drive better city planning.
Urbanization has been accompanied by various social and environmental challenges. Likewise, social and environmental inequalities have created disproportionate impacts on different groups of people. For instance, inequalities in environmental benefits have impacted human well-being and health, including for people with disabilities (PwD). This is because PwD tend to be already more isolated and have fewer social connections than the general public. The surrounding physical environment can exacerbate this issue, limiting community integration and level of satisfaction with social life. Since people with disabilities have less mobile and more limited activity spaces than other groups sufficient access to green space is a critical factor in improving living conditions, a healthy environment, and quality of life. It also improves social well-being by increasing social integration and interaction (Kaźmierczak, 2013). Previous studies show that low-income people live in areas with less vegetation (Nesbitt et al., 2019). Furthermore, the lack of accessibility led to feelings of exclusion and outsiders while the possibility of close contact with a green space promoted experiences with the space (Corazon et al., 2019).

According to previous studies (Astell-Burt & Feng, 2020; Danielewicz et al., 2017), accessibility and exposure to green space can significantly improve the quality of life, well-being, community integration, and health. Although there are many studies investigating the relationship between accessibility to greenspace, greenspace exposure, and the relationship between the distribution of greenspace proportion and socio-economic variables, there are few studies that address greenspace exposure and socio-economic variables among individuals living with disabilities. Therefore, understanding the relationship between environmental inequities and disabilities can help facilitate planning that can improve how communities are designed to improve the accessibility to green spaces and ultimately social connection, health, and community integration for PwD. The main purpose of this paper is to examine the relationship between green space exposure and income level among individuals living with disabilities. We then compare these statistics across major US cities. To conduct these measures, this study has two main research questions: 1. How does green space exposure relate to socioeconomic variables among people with disabilities, including income level and housing price? 2. Do the results in different cities within the United States of America seem to be consistent? Remote sensing data is used to classify green space metrics, including the proportion of green space within each block group using NDVI index, the proportion of trees, shrubs and grass within each block group using Object-Oriented classification, and proportion of parks in each block group. American Community Survey data are then used to identify the median community income and household income. Both household income and greenspace metrics are normalized across local regions by calculating the median percent of green space within the community by the percent of green space by block group (similarly for income). We then examined the analysis in six US urbanized areas using the results of the object-oriented classification, high-resolution landcover data and census data. We conducted the analysis in Phoenix, Portland, New York, Seattle, Indianapolis, and Los Angeles. The results show that individuals living with disabilities live in areas with
lower proportion of total green space. Also, there is a higher percentage of people with disabilities with a lower level of income living in block groups with smaller area of tree canopy. The findings are aligned with previous studies that show there is a correlation between socio-economic variables and accessibility to green space (Nesbitt et al., 2019). Our findings suggest that geographically targeted interventions could improve the environmental inequalities for individuals living with disabilities.

Citations


Key Words: Disability, Greenspace, Accessibility, Well-being

STORIES MATTER: USING PHOTOVOICE TO UNDERSTAND MIGRANTS’ PERCEIVED AND LIVED EXPERIENCES IN SMALL AND MID-SIZED CANADIAN CITIES

Abstract ID: 682
Individual Paper

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Immigration is mandated under federal jurisdiction in the Canadian context. The federal government aims to distribute immigrants into small and mid-sized communities to address economic and demographic challenges. However, despite proactive policy initiatives to attract and retain migrants to smaller cities, immigration has been unevenly distributed across the country, with 61% of immigrants concentrating in just three “gateway cities,” namely Toronto, Vancouver, and Montréal. Much of the attention in the literature has focused on how to settle and integrate migrants through factors such as employment, housing, and language, but less so on how migrants perceive and experience space and place which is conducive to building a sense of belonging and a welcoming community (Williams et al., 2015; Zhuang, 2023). This lack of understanding on migrants’ lived experiences affects local municipalities’ capacity to build welcoming and inclusive infrastructures that can support migrant settlement and integration.

Building upon Henri Lefebvre’s (1991) theory of the production of space, this research aims to gain a better understanding of the interactions between space, place and people by addressing the following research questions: What is the role of space and place in shaping migrants’ settlement and integration experiences in smaller Canadian cities? What are the implications for municipalities to develop welcoming infrastructures to support migrant integration and retention? According to Lefebvre (1991), space is not simply a physical structure for spatial practice where people encounter in urban reality and during daily routine, but is socially constructed by diverse, human experiences and abstractly controlled and conceived by a dominant class or the experts. Immigrant
settlement and integration is a multi-scalar process, representing the interplay of policies at the macro-level, community factors at the meso-level, and individual subjective lived experiences at the micro-level. Therefore, the theory of the production of space offers a relevant theoretical framework to understand how spaces in smaller cities are conceived as a result of planning policies and processes at the macro-level, perceived in daily encounters and spatial practices at the meso-level, and lived through actual human experiences at the micro-level.

This research involved 17 semi-structured interviews with immigrants, refugees and temporary foreign workers from nine smaller cities across Canada, 13 of whom contributed their Photovoice to capture and describe their day-to-day spatial practices and lived experiences in the communities they resided in. Photovoice is a powerful and inclusive tool that empowers marginalized communities to engage in social and policy change by critically reflecting and presenting their personal narratives and articulating their needs and perspectives (Nikielska-Sekula & Desille, 2021; Wang, 1999). Stories matter when it comes to the understanding of the complexity of the lived experiences of migrants in smaller communities and their agency in shaping those places and claiming space and rights to the city.

The findings reveal that public spaces play an important role in shaping migrants’ lived experiences in smaller cities and have an impact on their wellbeing when considering the opportunity for social interaction, and accessibility to ethnocultural amenities (e.g., food and retail), public services, and nature. Negative experiences of racism and discrimination in public spaces were reported by racialized newcomers, affecting not only their mental wellbeing, but also how they perceived the safety of public space, the sense of belonging, and the overall welcoming infrastructure of the host society. It is imperative for municipalities to combat racism and inequity through building culturally responsive public places and engaging migrant communities to co-create welcoming infrastructures.

Citations


Key Words: production of space, migrant settlement and integration, lived experiences, Photovoice, small and mid-sized Canadian cities

GLOBAL SIGNALS OF LOCAL IDENTITY: HOW IS DIVERSITY, EQUITY, AND INCLUSION INTEGRATED INTO AIRPORT 'ART AND CULTURE' DECISION-MAKING?

Abstract ID: 791
Individual Paper

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There is a growing awareness of the value of art in planning as an economic engine, a cultural asset, and a placemaking touchpoint. Airport art galleries differ from traditional art exhibitions in that they are often consumed
incidentally, in passing, rather than being sought out specifically as an art space. Further, airport art installations are largely publicly financed, which attracts public scrutiny. The physical design and presentation of art in hub airport facilities is an opportunity to signal local identity to a global audience with high visibility. Though, the ascertainment and presentation of local culture is a difficult topic in the arts, often dictated by a few key stakeholders rather than the community at large. Equitable presentation is especially salient at airports, where the presence of a secured area, accessible only to airline ticket holders, inherently limits access to the art for the community it intends to represent.

This research investigates whether the values and practices that govern arts and culture planning at hub airports meaningfully address diversity, equity, and inclusion (DEI). The Specifically, the study focuses on 64 airports classified as large or medium hubs by the Federal Aviation Administration’s National Plan of Integrated Airport Systems (NPIAS). These airports were selected due to their size, budget, and administrative support, which make them more likely to have the resources to implement an arts program. Moreover, these airports handle the most passengers, meaning their arts programs can reach a large, and often global, audience.

The researchers collected publicly available arts administration artifacts, with a focus on examining airport arts policies, airport arts plans, and ‘calls for art’ at the airport. The language used in the plans, policies, and calls for art provide insight into how DEI is incorporated into airport arts programs. The public arts master plans are comprehensive documents that provide a broad overview of the vision, values, and objectives of public arts programs. This planning effort is a significant undertaking, with very few arts and culture plans dedicated exclusively to the airport facility. In total, five airport-specific plans were found; as well as 19 public arts master plans from municipalities that owned and operated one of the airports in the study sample. The second category of documents is airport arts policies. Though these are less comprehensive than master plans, they offer insight into regulations and procedures required for the airport art procurement process. In total, seven airport-specific arts policies were identified. The final category of documents collected is public-facing art calls. This includes Requests for Art (RFAs), Requests for Qualifications (RFPs), and Requests for Proposals (RFPs). Examples of requests, primarily RFQs, were collected from 25 different airports.

Following a content evaluation protocol, the researchers recorded information about (1) arts governance processes, (2) arts governance goals, (3) the language used to define and describe DEI within governance policies and plans, (4) plan authors, (5) public participation efforts, and (6) art accessibility. The research findings further address the extent that the unique facility conditions and multi-jurisdictional planning processes for hub airports appear to contribute to or detract from efforts to meaningfully address DEI in arts governance policies and plans.

Citations


Key Words: Airport, Infrastructure, Arts, Inclusion

WARRIORS OF THE SHAOLIN: RACIAL GEOGRAPHIES AND VIOLENCE IN STATEN ISLAND
Abstract ID: 828
When construction of the Verrazano-Narrows Bridge began in 1959, there loomed a palpable dread among the overwhelmingly white populace of Staten Island. Despite being the site of the United States’ oldest free Black settlement, only about 4% of Staten Island was non-white by 1960. Staten Island residents feared what the bridge might bring to the least talked about New York borough: African Americans. The anticipated influx of migrants from other boroughs was railed in hundreds of local newspaper articles during the 1960s and 1970s (Sjursen, 2017). The negative periodical coverage was accompanied by local direct action. Comprehensive rezoning debates became contentious from 1960 to 1961 as local community organizations pushed the city planning commission to exclusively zone Staten Island neighborhoods for detached, single-family residents on large lots. The relentless lobbying resulted in racial geographies that have persisted in Staten Island for the last 60 years.

Building on the work of urban researcher Steven Flusty and poet S.T. Coleridge, Martin (2010) theorized an urbanism based on the coalescence of the city’s material, sensory, and emotional dimensions. Beer (2012, p. 677) suggests that “this poetic urbanism can already be found to be thriving within popular culture, and more specifically within hip-hop music.” Beer (2012) argues that popular music performers, rappers in this case, are urban researchers crafting racialized narratives from a combination of auto-ethnography and participatory experience (Kajikawa, 2015). Beer (2012, p. 684) states, “the particular values of hip-hop’s poetic urbanism is to be found in the thickness of the description and the evocative conceptual phraseology through which it communicates these urban experiences.”

More than ever, urban planners need to plan for inclusivity if we are to play a significant role in achieving a more equitable society. The task at hand requires the profession to understand both the history and social costs of doing otherwise and expand the toolkit by which we gather planning data. By utilizing the discography of Staten Island’s own Wu Tang Clan (RZA, 1993), I reveal the lyrical content of their debut album “Enter the Wu Tang Clan (36 Chambers)” as a work of poetic urbanism that details the racial geographies of their home borough. I support my findings through oral narratives found in the documentary “Of Mics and Men,” in which the Wu Tang Clan members describe the structural marginalization of public housing on the North Shore and their personal experiences of racial violence in the 1970s and 1980s and contemporary cases such as the death of Eric Garner in 2014, both of which stemmed from the presumed social order of Staten Island based on its historical zoning patterns.

Citations


Key Words: racial geographies, Staten Island, urban poetics, Wu Tang Clan, zoning

ECONOMIC IMPACTS OF EQUITABLE AND INCLUSIVE ECONOMIC DEVELOPMENT IN SOUTHERN CALIFORNIA
Abstract ID: 840
Before the COVID-19 pandemic, planning agencies had begun discussing and adopting an equity focus in regional planning. However, the pandemic brought to light racial and gender inequities in health, transportation, housing, employment, and broadband accessibility, exacerbated by historical planning practices that intentionally and unintentionally segregated and exploited communities of color. Since the beginning of the pandemic, planning agencies across the U.S. have taken deliberate steps to adopt equitable and inclusive planning practices with greater urgency. In July 2021, the Southern California Association of Governments (SCAG), the country’s largest Metropolitan Planning Organization (MPO), adopted the Inclusive Economic Recovery Strategy, a playbook for implementing inclusive economic growth strategies in the MPO’s planning practices.

While taking an equity perspective in planning is the moral approach, it is also essential for long-term economic growth in metropolitan areas. This paper quantifies the economic impacts of an equity approach in metropolitan planning, focusing on the SCAG region. The SCAG region includes six counties in Southern California spanning over 38k square miles. SCAG serves 18.7 million residents, accounting for 48 percent of California’s population. The SCAG region has a GDP of $1.6 trillion, making it the 15th largest economy in the world.

The region faces large inequities in the labor force. On average, women earned 81 percent of men’s wage income in the SCAG region in 2021. Black workers earned 72 percent, and Hispanic workers earned 56 percent of white workers’ wages in the SCAG region in 2021 [2]. These observed wage inequities impact the economy in several ways. Persistent wage gaps discourage workers and reduce labor force participation [3]. This decreases the labor supply, increasing the cost of labor. A smaller pool of workers reduces innovation and economic growth [4]. Another impact of racial and gender wage gaps is reduced consumption. Workers who are paid less have less disposable income and spend less on goods and services, reducing economic growth. Lower earnings and spending result in lower tax revenues for local jurisdictions. Finally, persistent inequity can contribute to social unrest, which negatively impacts the quality of life and perceptions of a region.

This paper quantifies the impacts of inequity in the SCAG region by applying the shift-share methods proposed by Buckman, et al (2022) [1], which compares the observed wage income to counterfactual wage income where wage gaps by race and gender have been eliminated. Drawing on the American Community Survey microdata disseminated by IPUMS, we first show that the SCAG region and the U.S. confront different forms of inequity in the labor force. Most notably, Asian American workers earned lower wages than white workers, especially in high-skilled occupations. In contrast, the average Asian American worker in the U.S. does not face a wage gap. We next estimate gains in the region’s gross domestic product (GDP) had inequity in the labor force been eliminated.

Preliminary findings show that in 2021 SCAG region GDP would be 15 percent higher if the racial and gender wage gap were eliminated. The potential gains from equity and inclusion in the SCAG region are higher than in the rest of California and the U.S. Specifically, we find that the potential incremental income in the SCAG region from eliminating the race and gender wage gap is nearly $200 billion annually or approximately 15 percent of the SCAG-region GDP in 2021. We find that the gain for the U.S. as a whole is a 10 percent increase in GDP. This analysis also explores the drivers of inequity in the region and proposes policies for equitable and inclusive economic development in large metropolitan areas such as the SCAG region.

Citations

Overview of research: It is vital to understand trans experiences to plan for inclusive cities, particularly as LGBTQ people’s existence in histories and public spaces face legislative challenges across the US. While research on women’s experiences highlight the roles of gender in perceptions of transit safety, surveys which include questions about a traveler’s sexuality point to mixed results as to whether sexuality influences whether and what type of harassment occurs (Ceccato & Loukaitou-Sideris, 2020). Crucially, when it comes to studying harassment on public transit, using binary gender metrics blurs the factors at play (Lick & Johnson, 2018). Often conveyed through the umbrella term trans, gender identities beyond the binary assigned at birth include, but are not limited to: transgender, nonbinary, two-spirit, genderqueer, genderfluid, gender non-conforming, pangender, agender, bigender, and third gender. A National Coalition of Transgender Equality (NCTE) survey indicated that transgender people experience greater harassment than cisgender people (James et al., 2016). However, we know very little about the mobility experiences, challenges, and associated harassment faced by transgender people. The sole US study to date, an interview-based study in 2015 in Portland, OR, found that “mobility that is altered, shaped, and informed by a broader cultural system that normalizes violence and harassment towards gender minorities” (Lubitow et al., 2017, p. 1398). This new research seeks to fill the gap in our understanding of transgender mobility. Understanding the experiences of people who identify as trans can inform policies, processes, and design in transportation planning to the benefit of all transit riders.

Research questions:
What are the public transit experiences of transgender and nonbinary people?
How do these experiences influence/affect their use of public transit, as well as their mobility and travel more broadly?
In what ways are these experiences influenced by other individual characteristics (e.g. age, race, appearance)?
Which gender conformity aspects influence harassment on public transit?
What policies/strategies can help improve the transit experiences of transgender and nonbinary people?

Research methodology + data sources: I collected data via an online survey (completed, 601 participants) and semi-structured interviews (ongoing, anticipated 30-35 participants) of adults (age 18+ years) who are transgender and/or nonbinary who have taken or are taking public transit in the US or its territories. I received IRB approval prior to recruitment. I recruited survey participants via personal networks, social media, Equality Foundation organizations, and local LGBTQ centers. Interview participants opted-in via the survey’s last question. I purposefully sought a diverse array of gender identities and expressions, as well as diverse racial and ethnic identities. As I myself identify as genderqueer and trans masc, I kept a reflexivity journal throughout the process. I will transcribe the interviews, code and analyze the survey and interview data for themes, and ultimately write my dissertation. The limitations of this study include its lack of generalizability, regional over/underrepresentation,
and participant self-selection bias.

Findings: Research in progress, survey analysis paper to be finished by August 2023, complete dissertation 2024.

Implications and actionable conclusions: My expected findings include the following. Public transit is a necessary mode of transportation that always carries the stress of the risk of harassment or assault for trans people. Self-identified gender expression nonconformance will correlate stronger than differences in the type and quantity of harassment an adult person receives in public transit environments than sexuality or gender alone. Surveying for gender remains too coarse to capture the breadth and depth of gender-related harassment. Knowing trans experiences with public transit and how they deal with it on can inform policies and procedures to make transit equitable in practice. It could inform instruction regarding the use of public space more broadly.

Citations


Key Words: gender, public transit, transgender, LGBT, transportation

AN ANALYSIS OF RACIAL EQUITY IN RELATION TO AGING IN PLACE FOR OLDER ADULTS: THE CASE OF GREATER RICHMOND REGION, VIRGINIA (RVA)

Abstract ID: 873
Individual Paper

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This paper studies the Greater Richmond Region, Virginia (RVA) to quantitatively examine two racial equity-related issues for older adults (age 65 and older): housing affordability (hereafter it is referred to as affordability) and accessibility to amenities and services (hereafter it is referred to as accessibility) by races, which profoundly affect the viability of their aging in place.

At present, both affordability and accessibility are racially inequitable in the U.S. (Grengs et al., 2013; Maclay, 2006; USA Facts, 2020). RVA is no exception. RVA geographically encompasses the central city of Richmond plus dozens of its surrounding counties and cities with a total population exceeding 1.3 million in 2020.

The data sources for this study include the U.S. population census, American Community Survey, SafeGraph’s Points of Interest (POI) data, planning literature, and others. The analytical tools include geospatial and statistical tools in ArcGIS Pro and SPSS. The geographic unit for analysis is the census block group.

Following introduction and literature review, this paper will first construct the block group level affordability index (minimum income threshold not to be cost-burdened, or MIT). Subsequently, the paper will build the block group level accessibility index (measuring accessibility to amenities and services, AAS). The weighted sum of MIT and AAS...
is the viability of Aging-in-Place (VAP). The paper will then conduct a regression analysis to identify the most important explanatory variables impacting VAP index and uses the Getis-Ord-GI* hot spot analysis algorithm to identify the geographic distributions of VAP index across the block groups of the Greater Richmond Region, which can be overlaid on the top of population distribution by races. In this way, the racial equity patterns can be discerned.

Based on this empirical analysis, the paper will summarize research findings, discuss policy implications, and suggest future research directions.

Citations


Key Words: affordability, accessibility, aging in place, racial equity, Richmond Region, Virginia (RVA)

LEARNING FROM CORONA PLAZA: IMMIGRANT PLACEMAKING AND INCLUSIVE PLANNING IN QUEENS, NEW YORK CITY
Abstract ID: 915
Individual Paper

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During the summer of 2020, in the midst of the COVID-19 pandemic, public spaces across New York City’s immigrant neighborhoods were transformed. Thrown out of work due to pandemic closures, and ineligible for Federal relief, many immigrant residents turned to street vending as a source of livelihood. Nowhere was this transformation of the use of space more evident or intense than Corona Plaza, a small expanse of concrete off a subway station in the neighborhood of Corona, Queens. Nearly one hundred vendors, mostly immigrants from Latin America, transformed the plaza into a vibrant marketplace, selling food, clothing, hand-made goods known as artesenias, along with masks, gloves, and other COVID safety gear.

The market that formed was entirely informal. Most vendors did not have licenses to vend, and the plaza itself was officially off-limits to any kind of street vending. But rather than the city cracking down on informal activity, or insisting on straightforward upgrading and formalization, something different happened at Corona Plaza. Utilizing the conceptual and regulatory flexibility opened up by the moment of crisis presented by the pandemic, street vendors, city officials, politicians, and non-profit partners were able to reach a consensus about the management of the plaza – a method of management that exists almost entirely “off the books”, in the realm of informal negotiation and unofficial forbearance.

This paper seeks to learn from this example by asking two straightforward but critically important questions. First, how did vendors make, negotiate, and win informal claims to space? And second, how did city officials and other actors like non-profits manage and ultimately validate these claims? What processes, formal and informal did officials use to enable this co-production of space. I argue that the example of Corona Plaza can take us beyond
ideas of tactical urbanism (Lydon and Garcia 2015) or everyday urbanism (Chase et. al. 1999) towards a more politically informed notion of insurgent citizenship and placemaking from below (Miraftab 2009). It adds to the literature on residents who remake the city based on needs (Kinder 2016), producing an improvisational infrastructure through processes of experimentation and probing in service of everyday survival (Simone and Pieterse 2017). But what makes this example different from other studies of informal immigrant placemaking is that the city – often the foil in many stories of bottom-up placemaking – acted as a (sometimes reluctant) partner in the process. The paper and presentation seeks to understand how this happened in Corona, Queens, and draw transferable lessons for planners working in similar contexts in the United States.

Citations


Key Words: Street Vending, Informality, Placemaking, Tactical Urbanism, Community Engagement

WHOSE CITY IS THIS? QUEER SOCIAL MOVEMENT RIFTS AND GENTRIFICATION IN NEW YORK
Abstract ID: 920
Individual Paper

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In New York City, queer social movements have been a part of the city’s fabric for decades. Historically, many of these movements have been place-oriented, making claims to space and place in bars, homes, and entire neighborhoods. One of the key moments in these spatial claims occurred in June 1969, when queer patrons of the Stonewall Inn, including Black, brown and trans people, rioted after years of police harassment and violence. This moment was significant and was credited with launching the modern gay liberation movement, at least in the popular imaginary.

In the decades since the Stonewall riots, gentrification in New York has rapidly accelerated. At the same time, a rift seems to have opened up among queer social movements. On the one hand, there are well-funded and well-connected LGBTQ social movement organizations like the NYC LGBTQ Historic Sites Project, which make claims to the spatial history along the lines of historic preservation. On the other hand, there are smaller social movement organizations (SMOs) like Fabulous Independent Educated Radicals for Community Empowerment (FIERCE) that have made spatial claims based on the needs of the most marginalized of the queer community.

The key question, then, is how have queer social movements been affected by gentrification? From this, we can ask why space and place are so important to the queer community in the first place. Dating back to before the Stonewall riots, spatial claims have been key ones to queer social movements. Then, as gentrification accelerated in New York, how did these social movements find themselves in this rift? Finally, how have these spatial battles been fought through historic sites like Stonewall?

Key to this project is the increasing rift among queer social movements in New York, with one side engaging in
historic preservation that might exacerbate the effects of gentrification by effectively creating theme parks to the idea of queerness, while potentially minimizing the radical history behind queer social movements in New York. On the other hand are organizations like FIERCE that have made demands for space for the most marginalized in the queer community.

These splits among social movement organizations. In essence, there is a conflict of culture and framing among these organizations and whose vision of the city matters. This conflict over “authenticity” in urban space is a key one in planning and gentrification literature.

I will argue that this split occurred due to several factors related to gentrification. The first is the professionalization of certain groups over others thanks to greater access to resources available to them through elite patronage. These resources, however, come with strings attached that may affect the mission of the organization, as has been explored in some social movement literature. This patronage may be the result of an SMO existing in an increasingly affluent area where philanthropists might be more willing to engage in “investments” in SMOs. This may leave other organizations that might be engaging in anti-gentrification work behind with a lack of resources, and therefore will have more difficulty in obtaining resources.

For planners and planning scholars, this research has the potential to challenge how planners should engage with SMOs. Instead of focusing on the resources of SMOs, their ideas should come to the forefront, particularly those engage in anti-gentrification activism.

Citations


Key Words: social movements, queerness, gentrification

MUNICIPAL BUREAUCRATS AND THE STRATIFICATION OF URBAN CITIZENSHIP: A SANCTUARY CITY CAMPAIGN IN MAYVILLE, CALIFORNIA
Abstract ID: 936
Individual Paper

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This paper uses the case of a sanctuary city mobilization in Mayville, California (pseudonym) to assess why a robust mobilization to radically change the boundaries of urban citizenship in a purportedly progressive city failed to achieve most of its egalitarian goals. Given the advantageous organizational and political conditions in Mayville, the social movement literature would predict success, but that was not the case. Given repeated efforts by certain government officials to divide and co-opt the campaign, the immigration and critical urban geography literatures would predict early fragmentation or its absorption of into the policing state, but that was not the case. Activists remained unwavering in their radical demands for “sanctuary for all” throughout the 14-month campaign. The government did play a decisive role in determining the outcome but not in the ways suggested by these literatures.
To better account for the role of government, we turn to Pierre Bourdieu’s work on the state bureaucracy as a complex, contradictory, and relatively autonomous political field that plays a decisive role in contests over the boundaries of citizenship. The theory of bureaucratic field, we believe, provides the tools to open the black box of the municipal government and analyze its role in political struggles and urban social movements.

Citations


Key Words: Urban citizenship, immigration, bureaucrats, insurgent planning

ANALYZING FACTORS OF GENDER EQUALITY AND WOMEN EMPOWERMENT: CASE STUDY OF WOMEN IN ORGANIC AND ADJACENT ORGANIC FARMING SYSTEMS IN THE MID-SOUTH REGION, UNITED STATES

Abstract ID: 977
Individual Paper

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It is evident that even though women play critical roles on farms and in sustainable agriculture, they have to go through various social, economic, and political challenges in the male-dominant farming sector, their participation has been taken for granted, and their contribution has been underscored. Attaining their identities as ‘farmers’ and ‘ranchers’, valuing their roles in farming systems, giving voice to their decisions, and gender equality in community and family are motivating factors for the sustainability of women farmers, and encourage more to participate in the farming sector. These are essential factors for their empowerment, as asserted in the study in the context of women farmers in sustainable agriculture in the US. (Sachs et. al, 2016).

‘Gender transformative approach’ (McArthur et. al, 2022), as stated by the authors “Gender transformative approaches aim to reshape gender dynamics by redistributing resources, expectations, and responsibilities between women, men, and non-binary gender identities, often focusing on norms, power, and collective action” is the latest literature on postmodernism perspective of ‘gender equality’. Underpinning this approach, my study will explore and understand how the emerging transformation in gender perspective towards complementarity is reshaping women farmers’ position in the farming system. There is very limited literature on gender analysis with this approach. Most of the Gender analysis scholarships are in the context of the Global South, which is driven by the international development agenda. So, the focus has been to understand gender from the perspective of feminism, which is a kind of segregating approach (Kabeer, 1999).

Some of the research questions, I am interested to explore are, how women in organic and organic adjacent farming in the Mid-South region, define themselves as empowered. What are the factors they value to express their empowerment? What are the indicators of gender equality that relate to their empowerment? How do they want to position themselves in the policies of the sustainable local food system?

This is a region-specific study, where it will adopt the ‘Qualitative Approach’ following the combination of Stake’s
and Merriam’s research methodologies for the ‘Case Study Method’. Three sources of data collection will be used, semi-structured open-ended interviews, observations, and secondary documents. Sampling is distributed within the ‘location’ of urban, peri-urban, and rural, and ‘produce’ vegetables, grains, ranchers, and livestock (chicken and egg layers). Constant-Comparative Technique (Glaser & Strauss) is used for the purpose of coding the data and categorization under established factors identified through a theoretical framework. The comparison matrix will be prepared to compare the analysis of the factors from three data sources. The data analysis tools developed are through the integration of, a) the Gender transformative approach, b) Feminist Agrifood Systems Theory (FAST), and c) Gender analysis Frameworks. The interpretative framework that will be applied for analysis is aimed at underpinning the philosophical worldviews of social constructivism, Transformative, and Postmodernism. based on the being used for the study is social constructivism.

The findings will be around the identification of factors essential for reshaping ‘gender equality’ in the context of sustainable agriculture and the local food system, which are supporting the discourses of gender complementarity. These factors will be categorized as political, social, institutional, political, and cultural, in the context of women farmers in the Mid-South region of the United States. The main contribution of the study will be, a) Identification of the Factors to understand ‘women empowerment’ in the context of women farmers in Developed countries, which could be useful in regional comparison. b) Development of the Gender analytical tool.

Citations

- Creswell W. John and Poth N. Cheryl, Qualitative Inquiry and Research Design-Choosing Among Five Approaches, Fourth Edition, Sage Publication

Key Words: Gender equality, organic and organic adjacent farming, Women empowerment, Mid South Region, Case study method

RETHINKING SPATIAL ANALYSIS AND ANALYTICS: NATIVE, BLACK, & LATINA FEMINIST THEORIES AND METHODS FOR ENGAGEMENT, EQUITY, AND JUSTICE

Abstract ID: 1023

Individual Paper

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Spatial analysis (looking backward) and analytics (looking forward) are fundamental to planning and design education and practice. They often include different forms of geo-spatial data, GIS, mapping, and displaying various scales and details about space, usually conceived as land or buildings. Specific areas within planning such as transportation, add other phenomenon such as transportation modes and people’s mobility to their work. Bodies as space and non-western understandings of time and relationships connected to space are habitually absent from spatial analysis and analytics pedagogy and less frequently put into practice. These absences leave great holes in ideas about spatial production and engagement.
In this paper, I provide a set of theoretical and methodological interventions to make planning and design spatial analysis and analytics more racially and gender sensitive. I will draw on Native, Black, and Latina/x feminist scholars to start chronicling their collective wisdom. These feminist thinkers interrogate space in ways that challenge the underpinning logics of western-male-hetero space, specifically related to the temporal and relational phenomenon, while also providing opportunities to repair, redo, and renew.

I will incorporate the work of Indigenous scholars, including Harjo (2019), whose "kin-space-time envelops" enables planners and designers to learn about relationships across generations, space that is historical, contemporary, and future, and time that can be bent. I will engage with Black scholars such as McKittrick (2006 & 2011), who force us to understand that the legacy of slavery, its trauma and embodiment, is ever present in our spaces. We, however, can repair. We can move away from the "bondage and exploitation" (Wright, 2020) embedded in spaces designed and planned with a white spatial imaginary to spaces where equity and justice are dominant. I will include Latina scholars, for instance, Córdova (2013 & 2016), who critiques the economic restructuring that governs our spaces. She leads us to challenge the white logics of economic places. Together these feminist scholars of color put us on a path to rethinking spatial analysis and analytics for engagement, equity, and justice.

Citations


Key Words: spatial analysis and analytics, Feminist theory, Black, Native and Latina/x Methods, embodies space, white spatial imaginary

MAKING A CASE FOR PSYCHOGEOGRAPHY IN CULTURALLY RESPONSIVE PPGIS
Abstract ID: 1036
Individual Paper

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This paper encourages public participatory GIS (PPGIS) practitioners to take more liberties with the visual tools employed in community mapping processes in a way that genuinely empowers their public stakeholders. In Western pedagogy, many of our maps are limited by the lineage of representational techniques that emerged from the scientific Renaissance and colonization of the Americas. As PPGIS practitioners, are we unintentionally reinforcing the same social order that has maintained a segregated housing and education system and denied the general public a meaningful stake in development plans?

In her landmark lecture and essay, “The Master’s Tools Will Never Dismantle the Master’s House”, Audre Lorde ties the gross oversights and lack of inclusion in academic feminist circles at the time to their dependence on white supremacist toolkits. “What does it mean when the tools of a racist patriarchy are used to examine the fruits of that same patriarchy?” she asks, immediately telling us the answer: “It means that only the most narrow perimeters of change are possible and allowable.” (Lorde 1979/1984) Perhaps the visual tools we use to create cartographic representations also need to change to broaden the perimeters of change in community land use planning processes.
While technological advancements in mapping over the past few decades have expanded our ability to share datasets across public and private agencies and imbue maps with greater perceived legitimacy and accuracy, our current GIS toolkit is limited by a dominant set of cartographic assumptions. As discussed by the scholars cited in my paper, the mapping techniques prioritized by GIS reinforce existing social norms, codify politically charged boundaries, and overlook “informal” uses of space. Despite the overwhelmingly altruistic intentions of PPGIS practitioners, our dependence on such a standardized toolkit can be disempowering for communities whom this same emphasis on ownership, property boundaries, and capitalist social norms has historically oppressed. So, what strategies can PPGIS practitioners use to transform mapping practices into an approach that mirrors our ambition to empower communities? What can we learn from alternative and artistic practices, like the psychogeographic methods popularized by the Situationist International?

I have spent the past two years testing participatory mapping and psychogeography strategies that deconstruct our cartographic assumptions in order to produce more empowering maps. The observations made by my collaborators (the participants) and myself offer instructive clues towards developing a new, more culturally responsive approach to participatory mapping. In the final section of this paper, I will discuss three Boston and New York City-based workshops and their most informative findings. In my presentation, I will share the maps that resulted from these artistic and research partnerships with the Museum of Modern Art (MoMA) PS1, the New Museum of Contemporary Art, and 826 Boston’s Youth Literary Advisory Board (YLAB).

Citations


Key Words: psychogeography, spatial justice, cartography, PPGIS, Black space

PLANNING INCLUSIVE CITIES IN THE GLOBAL SOUTH AS A LOGICAL FALLACY: PERSPECTIVES FROM PLANNERS IN TRAINING
Abstract ID: 1049
Individual Paper

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Urban Planning discourse and praxis worldwide have been influenced primarily by insights and models rooted in Western ideals and experiences. Planning inclusive cities is an ideal that has gained global attention, for example as articulated in goal 11 of the United Nations Global Agenda 2030, popularly known as the Sustainable Development Goals. Beyond discourse and rhetoric, cases or models of successful inclusive cities are rare to find beyond the most micro level of some societies or social organizations. Increasingly, the ideal and task of planning inclusive cities beg various questions that planning scholars and practitioners continue to contend with. Three of
such questions are addressed in this paper in order to ascertain the significance and challenges of planning inclusive cities in the global south (GS). One, what do young graduate planning students and future planners of cities in the GS see as critical issues or problems of extant cities in their countries? Two, what would these future planners want to see as key features or characteristics of future cities in the GS? Three, and more precisely, what do the planning students see as the importance and challenges of planning inclusive cities in the GS? This paper contends that, in the burgeoning cities of the GS, quite unlike their counterparts in the more industrialized global north (GN), some pressing problems make the planning of inclusive cities less of a priority, indeed less of an issue, than planning scholars in the GN make of it. Among the problems are unemployment, infrastructure decay, climate change, globalization fall-outs, populist movements, human displacements by conflicts and stochastic events, etc. To address the research questions and contention in this paper, over a one-week period, an online questionnaire survey was conducted of a convenient sample group of 30 graduate planning students and future practitioners from ten middle eastern and African countries. 16 of the 30 responded to an invitation to a three-hour seminar discussion of the survey results and the research contention. This method triangulation led to three key findings. One, the major problems that existing cities in the GS face and the ideal features of future cities are similar to those of cities in the GN with the exception of inclusiveness. Two, inclusiveness is not as much a priority in cities of the GS as is creating enabling cities that provide access to opportunities and resources for self-empowerment, self-preservation and decent quality of life. Three, planning inclusive cities as often advocated by planning scholars from the GN is part of the logical fallacies that have shaped, and continue to shape planning education, discourse and praxis in the GS, and there is a need to correct such fallacies in the quest to plan sustainable and enabling cities.

Citations

- Purdue Online Writing Lab (OWL). Logical Fallacies. College of Liberal Arts. Available at: https://owl.purdue.edu/owl/general_writing/academic_writing/logic_in_argumentative_writing/fallacies.html

Key Words: Enabling cities, Logical planning fallacies, Global south cities

THE POWER OF CARE: A CASE STUDY OF THE SOCIO-SPATIAL NAVIGATION OF MUSLIM AND ARAB IMMIGRANT WOMEN IN MISSISSAUGA, ON

Abstract ID: 1083
Individual Paper

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Background: Drawing from interdisciplinary areas of scholarship and philosophical Islamic principles (Mortada, 2003) informing responsible community building processes, this research presents a contextual assessment that explores various underlying complexities impacting the lived experiences of Muslim immigrants in Canada. To understand the varied dimensions of community building, we use Mortada’s (2003) principles based on Islamic ethics of the integration of faith and action. Mortada highlights the Islamic principle and social framework of responsibility (p. 17), (Arabic: Amanah). Amanah is interpreted among Muslims scholars through examining
Quranic verses and Sunnah (i.e., lessons from Prophet Mohammad PBUH) as a "fundamental virtue associated with all aspects of human actions" (Sirajul Islam and Samsudin, 2018, p. 437). This responsibility implies an absolute religious duty to support and maintain the well-being of community, land, environment as well as oneself. It is central to care ethics, viewing care relations as interconnected and interdependent, and offers the fundamental basis for striving towards achieving social and environmental resiliency and justice.

Scholarship on theoretical/conceptual frameworks of care and compassion is limited in planning literature and development praxis (Berkley, 2020). Literature on lived experiences of Muslims in North American cities have two major gaps: (1) the generalization of complex Muslim identities (Ali, 2008), and (2) the impacts of peripheralized formal care networks (Hackworth et al, 2012). In response, we aim to understand the facilitators to (re)building belonging and identity in a place of promised peace, freedom, and permanence for Muslim Arab immigrant women in Mississauga, a growing population group.

Research Questions: 1) What are the Muslim and Arab immigrant women’s networks of care in their communities and how do such spaces impact their sense of identity and belonging in place? 2) What are the social and physical barriers and facilitators to accessing formal and informal networks of care that foster a sense of belonging?

Methods: We recruited eight participants who visibly-identify as Muslim (wear a Hijab or head veiling) Arab immigrant women living in Mississauga and used Sketch and Social Network Mapping (Gieseking, 2013), to enable them to share their perceived facilitators and barriers while seeking to (re)establish a sense of belonging, identity and formal/informal networks of support in a new home away from home.

Results: The findings reveal that the majority of formal spaces of care noted by participants (e.g., Mosques, Islamic classes, and age-friendly Islamic activities) are peripheralized from residential landscapes through discriminatory policy and zoning codes contesting its existence. Such places, however, are deemed integral in cultivating social and spiritual well-being, as well as a shared sense of belonging in and attachment to place over time. This peripheralization does not only impose spatial barriers to equitably accessing formal and informal networks of specialized care and support (e.g. lack of public transportation, lack of age-specific services, etc.), but also hinders participants’ ability to feel like they belong in place, thus, depleting their emotional well-being.

Relevance: This research begins to address the need to explore the diverse social identities of Muslims in Canada in variegated geographies. This is done through getting beyond the generalization/misinterpretation of their everyday lives and providing contextual understandings that meaningfully represent the complex lived realities of people, in place, across time. For planning practice, this information leads to recommendations for land use and formal care services planning policy changes, as well as the need to educate planners on these complexities to conduct meaningful engagement and build truly inclusive cities.

Citations

ACCESSIBILITY, DISABILITY AND THE PLANNING PROFESSION: AN EXAMINATION OF EVERYDAY PRACTICES OF PLANNERS

Abstract ID: 1132
Individual Paper

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Background: Despite the advent of disability legislation (like the Americans with Disabilities Act in the United States and the Accessibility for Ontarians with Disabilities Act in Ontario) and the disability rights movement, the exclusion of disabled people in communities continues to be normalized – thus denying their right to the city. Planners are not value neutral – they shape built environments, which serve as litmus tests for broader social exclusions, and reveal who they believe should “inhabit the world” (Hamraie, 2013, p.2). Inattention to disability in planning is deeply troubling. McCormick et al. (2019) highlighted that the top two North American planning journals have only published one article each in the past 20 years on disability. Terashima and Clark (2021) found only 36 articles on disability within the top five global planning journals since 1912. In their review of articles in three planning industry publications in Ontario over the past 20 in a previous review, Eyob, Kolcak and Biglieri (2022) found that of the 3734 articles, 96 mentioned disability or accessibility and only 17 (0.04%) were focused on specifically on disability. When disability was considered, it was considered only as a physical disability and accessibility was discussed only as a design checklist (Eyob, Kolcak & Biglieri, 2022). While these findings show a disturbing disability gap in planning, they do not fully capture planners’ everyday practices.

Methodology: We have conducted 11 semi-structured interviews with non-accessibility specialist planners in public and private sectors in Ontario, asking about their knowledge, use, understanding of these concepts generally and in planning regulation/policy, their use/perceptions of models of disability, their educational experiences (in school, on the job, professional learning, personal), barriers to accessibility and inclusion of disabled folks in built environments from multiple perspectives.

Findings: Using a grounded theory approach, we found several emergent themes including: misunderstandings of access and disability as concepts generally and limited knowledge of land use planning/accessibility legislation, regulations and policies; practical constraints (like private consultant planners and convincing clients to go beyond requirements and austerity budgets); perceived financial burdens of accessibility; believing that accessibility is another profession’s responsibility; workplace environments that do not engage with disability; a lack of experience engaging with disabled people in planning work; and a lack of knowledge (from formal education, in practice, etc.). These findings illustrate the complexities of dis/connections between education(s), knowledge(s), attitudes/perceptions, practical realities, professional responsibilities, power, and disciplinary silos. It is important to note that participants wanted to “do better”, but often lacked the knowledge and tools to do so.

Relevance: Disability is a type of difference that is undertheorized in planning theory, research, and practice. These theoretical omissions have serious implications for planning practice. For example, a review on walkability concluded that “failing to capture diversity in ages and abilities...has potentially resulted in data-informed practices and guidelines that perpetuate the exclusion of spatially marginalized groups” (Stafford & Baldwin, 2018, p. 25). Further, systematic reviews of entire subdisciplines like childhood mobility reveal a paucity of research considering disability as a form of difference (Ross & Buliung, 2018). If planning scholars and practitioners want to build just cities, truly inclusive of all difference(s), disabled people’s experiences not only have to be understood in a way that centers their voices – planning practice itself must be examined to understand how we got here, what is happening and where to go next. We propose a number of potential areas for intervention aimed at planning curricula, professional learning, planning values and ethics, developing innovative tools, needing disability
representation and data, taking responsibility for accessibility as planners; and questioning status quo perceptions about feasibility.

Citations


Key Words: accessibility, planning practice, disability, education

ZIP CODE RECOVERY: LOW INCOME HURRICANE SURVIVORS LEFT OUT - AGAIN

Abstract ID: 1198
Individual Paper

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According to the National Oceanic and Atmospheric Administration (NOAA) Office of Coastal Management, from 2017-2021, the United States has averaged 17.2 annual climate/weather disasters. In 2021 alone, the U.S. experienced 20 billion-dollar disasters and since 1980, the U.S. has experienced 341 climate/weather disasters which in toto, resulted in $2.155 trillion in losses. The Federal Emergency Management Agency (FEMA) is authorized under The Stafford Act, to be the lead federal agency tasked to help people after disasters specifically floods, hurricanes, earthquakes, and forest fires.

The U.S. House Appropriations Committee allocated FEMA a $25.89 billion budget and the Biden Administration requested and additional $771.3. With so much recovery money available, the question this study endeavors to explore is which individuals get the bulk of federal recovery money? Using two zip codes with stark demographic differences, this study used FEMA data to determine that wealthier individuals who have the potential to financially recover faster from catastrophic weather events, receive more federal recovery money.

The current financial recovery process favors individuals who have the assets and financial flexibility to sustain themselves after a catastrophic weather event whereas low-income individuals struggle to submit the application for financial assistance and acquire basic living necessities after a weather-based event. While the largest negative impacts of weather events are observed in Africa, Asia, Central and South America, low-income urban dwellers experience similar development constraints and have high vulnerability to climatic perils which, along with food, water, and housing insecurity low-income urban dwellers are being shut out of the financial recovery pipeline.

Citations


Key Words: Disaster, Aid, Denial, Inequity, Politics

PLANNING FOR DIVERSITY AND DIFFERENCE OUTSIDE OF GATEWAY CITIES: EXPLORING RURAL IMMIGRANT SETTLEMENT INITIATIVES IN ONTARIO, CANADA

Abstract ID: 1201
Individual Paper

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Over the past seventy years, immigrants to North America have primarily settled in large gateway cities and suburbs. More recently, the federal and provincial governments in Canada have launched initiatives to promote immigrant settlement into rural and remote communities in Canada (Patel et al., 2019). These initiatives seek to mitigate the economic and social impacts of population decline common in many rural communities, and concomitantly address the barriers to successful integration faced by immigrants in traditional gateway cities (Zhuang, 2021). These emergent trends provide new opportunities to explore issues and approaches to planning for diversity and difference in small cities and rural areas that are now responsible for attracting and retaining diverse immigrant populations under new federal immigration policies (Rishworth et al., 2022). Despite the extant literature acknowledging the importance of local environments on the health, well-being, and integration of recent immigrants, there is paucity of research that explores how positive settlement outcomes are achieved outside of densely populated and well-resourced urban areas (Patel, 2019). More specifically, there are increasing calls to explore how municipalities and municipal planning can support broader efforts to create ‘welcoming communities’ that facilitate immigrant integration (Harwood, 2022; Zhuang, 2021) and fully support the complex and long-term settlement needs of trans-national migrants (Miraftab, 2016).

To that end, this paper presents findings of a mixed methods study on rural settlement of immigrants in Southern Ontario, Canada’s most populous and diverse region. The aim of the study was to explore the community impacts of a growing immigrant population, and how rural communities are supporting the settlement needs of diverse immigrants. In the first phase of the study, quantitative data was collected through an online survey of 177 governance and settlement stakeholders in small and rural communities across the province. The survey responses were analysed using descriptive statistics and cross-tabulations. In Phase two, key informant interviews were conducted with 30 key informants in the local governance and settlement sectors. Qualitative data were analysed using framework analysis with codes informed by the survey findings.

The findings reveal that the primary focus of both immigrants and communities was economic integration. Yet, there was a juxtaposition between the desired employment opportunities among the well-educated and professionally trained immigrant population, and the labour shortages faced by local communities. Further, key aspects of settlement such as housing, transportation, social services, and tele-communication infrastructure were described as inadequate or unavailable in many rural areas. Stakeholders also spoke of the varying levels of
community success in attracting versus retaining immigrants, which undermined their long-term goals for population and economic stability and social diversity. The paper includes a discussion of opportunities for local municipalities to better integrate and settle diverse immigrants while highlighting the significant resource gaps faced by local municipalities operating under the current federal immigration policies. Finally, the paper concludes with a critical assessment of immigrant settlement and retention initiatives in under-resourced rural communities, and the long-term impacts of planning for diversity and difference outside major urban areas.

Citations


Key Words: rural immigration, Planing for diversity and difference, immigrant settlement and integration, welcoming communities, economic integration

GENDERED ACTIVITY SPACE IN BEIJING: A BIG-DATA APPROACH ANALYSIS USING MOBILE-PHONE SIGNALING DATA

Abstract ID: 1277
Individual Paper

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Urban scholars have long documented gender differences in daily-life experiences and activity patterns in cities of developed and developing countries. Women often face greater constraints from household and child care responsibilities, thus having more fragmented and constrained space-time activity patterns than men. In China, a growing literature also revealed the space-time constraints that women face in every-day life as most of them have to balance between family and work responsibilities. However, to date most studies have used sampled questionnaire survey method to collect information of time use and activity diaries of a limited sample size of residents. Aside from the sample representativeness issue, activity diaries of one or two days cannot accurately capture the every-life activity space patterns that only emerge from observation of routine activity locations over a longer period of time.

In light of this intellectual gap, in this paper we seek to investigate the gendered pattern of everyday-life activity spaces of Beijing residents using a large location-based mobile-phone signaling dataset of China Unicom users covering activity location over the month of November, 2020. We describe the overall gender differences of daily activity space patterns, while compare such gendered patterns by different residential locations (inner-city and suburb) and by weekdays and weekends. We expect to find that female residents’ daily-life activity space is more home bound with more time and activities constrained to close-to-home locations. We also conducted regression analysis to test the extent to which such gendered pattern is shaped by residential location, as well as proximity to
GENDER DISPARITY ON TRANSIT COMMUTING DISTANCE: A STORY OF AUSTIN, A FAST-GROWING CITY IN THE TEXAS TRIANGLE

Abstract ID: 414
Poster
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Urban public transportation systems have multiple goals, but a major one is to serve people with less access to public facilities, such as those who cannot drive or afford automobiles. Many studies have shown that women generally have less mobility than men; low-income, carless women are the most disadvantaged group in most urban areas. Studies have also found that women have travel patterns distinguishable from men; women generate more multipurpose trips using multiple modes, and their trips are more dispersed geographically and temporally. Men, conversely, drive more for single-purpose trips based on fixed schedules. The strong linkages between urban transit systems and women's travel behavior require more attention to urban transit policies for low-income, carless women.

Urban public transit systems can improve mobility and accessibility to multiple urban facilities and job opportunities in a region, this contributing to expanded employment and productivity growth. Transit systems, however, constrained by multiple urban features they must take as given, such as land use distribution and regulations, property values, and external investment. Thus transit routes and networks have uneven distributional impact across neighborhoods and social groups. Improvement for urban transit does not necessarily result in positive employment growth, especially for women and some under-represented groups. Thus, it is urgent to evaluate and discuss the equity implications of changes in urban transit systems, especially for low-income women, in the face of major economic and land use changes in the US.

Citations
• Hanson, S. (2010). Gender and mobility: New approaches for informing sustainability. Gender, Place & Culture, 17(1), 5-23.
In an increasingly growing metropolitan area like Austin, MPOs and local transit agencies are encouraged to provide more transit services to meet the increasing demand due to population growth. However, whether public transit provides equitable mobility for different social groups, especially women, low-income families, and carless people, still varies case by case. This study focuses on equity issues in one of the fastest-growing US and Texas cities, Austin, a key component of the Texas Triangle megaregion. Austin, located along US Highway I-35, is one edge of the triangle anchored by Dallas, San Antonio, and Houston. Austin has high employment in state government, electronic equipment, and industrial machinery. The population of Austin has increased 2.4 times since 2000, leveraged by the increasing number of high-tech companies. In an expanding city like Austin, do women, especially low-income land carless women, make more efforts, e.g., longer commuting time and travel distance, to get the jobs?

With the 2015 transit survey data from Capital Metro, the local transit agency in Austin, Texas, the study shows that 1) women who use public transit to commute, on average, travel shorter miles than men. 2) lower income and zero-car households are associated with shorter transit commuting distances, while the influences are gender-free. By testing the interaction effects with other factors such as age, ethnicity, car ownership, household size, and travel time, the study found that women tend to spend longer time commuting in the evening hours. By discussing the findings with the literature, I concluded that given the moderate disparity between women’s and men’s transit commuting patterns in Austin, women are still forced to commute shorter, possibly because of domestic chores.

Citations


Key Words: gender disparity, transit, commuting distance

THE BLACK WOMAN’S BURDEN: NAVIGATING DISPLACEMENT AND DISRUPTION OF ACCESS TO SOCIAL SERVICES AND INFORMAL SUPPORTS IN GENTRIFYING NEIGHBORHOODS

Abstract ID: 212
Research in Motion (RiM)

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Gentrification and displacement have spread rapidly throughout Washington, DC in the past decade, largely impacting long-time African American communities, particularly those located in previously disinvested neighborhoods. One of these communities is Barry Farm, a historic and severely neglected public housing complex in Southeast DC which was selected for demolition by the city in order to make way for new mixed-use development projects. While scholars have invested time and effort into understanding how gentrification has impacted low-income residents in DC’s historically black neighborhoods, those studies fall short of providing an in-depth analysis of how black women specifically are affected by displacement. In public housing projects like Barry Farm, low-income black women and their families largely occupy these units and often rely on social services and informal support networks (such as, TANF, SNAP, and Housing Vouchers) to survive. For these women, displacement includes more than the loss of shelter; but also the loss of social services, informal support networks, and neighborhood friends. While the city promised to replace their housing during redevelopment, replacing these other losses has been more challenging and has often lacked priority.
Theoretically grounded in Black Feminist Thought, this study incorporates primary and secondary data using semi-structured interviews, participant observations, archival and document analysis, to investigate how low-income Black Women experience gentrification, survive displacement, and navigate their transition out of gentrifying neighborhoods. After receiving IRB approval, I conducted extensive archival, document and media analysis in efforts to document black women’s displacement from Barry Farm and their participation in anti-displacement efforts after learning that their community would be gentrified. In doing so, I was able to identify former Barry Farm residents to interview and observe whose lives and experiences are imperative to answering the following questions: (1) What does the network of social services and informal supports look like for black women prior to their displacement; (2) Where do they go post-displacement and how does it affect the network of social services and informal supports accessible to them; and (3) How do black women perceive their state post-displacement. To answer these questions effectively, a blend of traditional ethnography and autoethnographic methods are being employed. In addition, storytelling will be used to translate the data obtained into stories about Black Women’s experience with displacement and disruption in Southeast DC; and provide a rich analysis about how these residents view and articulate their experiences and the culture of displacement for black women as a whole. Compensation to participants will be in kind services and assistance with connecting to needed resources and opportunities in their new locations.

This study seeks to expand our understanding of what it means when residents are displaced for new development and how supports including social services and informal networks are pivotal for a successful transition. Ultimately, understanding displacement and disruption of access is critical to understanding how to create effective policies and practices that protect vulnerable population groups when low-income communities gentrify. For black women specifically, more research is necessary to understand the pressures that force their displacement; and how to create effective anti-displacement policies and strategies that protect them when their communities gentrify. This research will contribute to the limited scholarship about formerly displaced residents, how they navigate their transition out of gentrifying neighborhoods, and how they begin to rebuild their social service and support networks in their new environments. In doing so, it seeks to provide academics, practitioners and policy makers a foundation for strategizing on ways to improve urban redevelopment and renewal practices, social service distribution and support network access to account for the losses that vulnerable populations often suffer as a result of displacement.

Citations


Key Words: Black Women, Gentrification, Anti-Displacement, Black Feminist Theory, Social Services

MAKE RECOMMENDATIONS TO PROMOTE PUBLIC PLACES USAGE FOR WOMEN LIVING IN DISINVESTED NEIGHBORHOODS IN TALLAHASSEE, FL

Abstract ID: 1078
Research in Motion (RiM)
Users' preference is a key criterion in the design of public places. Studies showed that the driving factors for urban public place usage and individuals' perceptions differ among genders and races. Gender affects the frequency and duration of people visiting public spaces. The Stimpson volume (1981) introduced women's vulnerability in public places. Researchers have found that women are often full of anxiety and insecurity when staying in the city, especially when they are alone. These negative emotions lead women to change or reduce their daily activities; as a result, they lose the opportunity to visit public places that are supposed to be open to all people. Race, like gender, also affects how people use parks. Working-class women of color, for example, see activities in parks, a common form of a public place, as a luxury belonging to middle-class white women because their time and scope of activities are restricted by the amount of paycheck and domestic work they do (Krenichyn, 2006).

Tallahassee, Florida, is considered one of the most economically segregated cities in the United States. Economic segregation unevenly distributed resources and the disparity between poor, historically African American, and middle- to higher-income neighborhoods (Terry, 2017). Previous studies found inequalities in park acreage and quality, with fewer or lower quality parks for minority and low socioeconomic status populations (Rigolon, 2016). Frenchtown and Providence, two historically African American areas in Tallahassee, were selected in this study. The researcher collected reliable secondary data from the American Community Survey (ACS) to understand the context of the two communities. Then, field visits were used to study existing parks and public areas. After that, to find out the status of women's use of parks in the communities, the research conducted semi-structured interviews with female residents. Lastly, based on the experience and expectations of female inhabitants for parks and other public spaces, as well as the current state of the venues, the researcher created a list of suggestions for public space design for the respective neighborhoods.

Several findings were drawn from the study: (1) Everyone who participated in the interview recognized the value of public space, particularly the necessity for safe activity area for neighborhood kids. (2) The absence of public amenities or greenery has prevented the effective use of the community's existing public space. (3) Poorly maintained green spaces and street environments, as well as inappropriate street behavior, are key turnoffs for users. (4) Community events strengthen residents' feeling of identity and community belonging which motivates them to utilize public spaces. Based on the findings, the researchers developed a series of short- and long-term recommendations for the two communities' public space design.

This research has reference significance for the community revitalization in Tallahassee. Both selected neighborhoods were approved with funding in built environment construction, and the lens of female residents demonstrated in this research can offer a distinctive perspective as part of the community-driven process. This study, as a pilot study, emphasizes the importance of bringing awareness to women’s perception of community public spaces. Women typically perform more domestic duties than males. Thus, public areas that have close proximity to residences have a greater tendency to promote women’s use (Kaczynski et al., 2009). When planning the built environment of a community, it is critical to take the reference proportion of female inhabitants' experiences and expectations into account. Additionally, most women with children would include their children's needs in their own, and it is beneficial to draw focus to female users' perspectives to gather information on children's needs for public space.

Citations


Key Words: public place, disinvested neighborhood, female users

OPEN COURSEWARE, CLOSED DOORS: INCLUSIVITY IN OPEN EDUCATIONAL RESOURCES (OER) FOR TRANSPORTATION PLANNING

Abstract ID: 1084
Research in Motion (RiM)

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A top priority of the United States Department of Transportation (U.S. DOT) under the Biden-Harris Administration is Equity as described in the Equity Action Plan developed in response to Executive Order 13985 (U.S. DOT, 2022). Although expanding access is one of the key performance indicators, transportation equity is more than just accessibility. Accessibility is necessary but not sufficient with a greater need not only for “meaningful and representative public participation engagements” (U. S. DOT, 2022, p. 9) but also for a diversity of perspectives and voices as decision-makers and technical experts.

A study conducted by the American Planning Association’s Planning and Women Division which surveyed over 300 municipalities revealed that the vast majority (98%) failed to address the needs of women and gender minorities in the city’s comprehensive plan, despite the near parity of female planners in practice since 2018 (Ryan, 2019; Turesky & Warner, 2020). These researchers argue that women’s knowledge is frequently discounted in favor of male expertise and in order to be recognized for their contributions, women often shift their behaviors in alignment with male expectations thus the structural inequity and gender bias are replicated in decision-making despite the appearance of representation (Turesky & Warner, 2020). Greater inclusivity of planners of all genders in the workplace has its origins in training and education, yet here also the research and experiences of gender minorities are less prevalent, and their validity is called into question (Turesky & Warner, 2020).

Open Educational Resources (OER) present an innovative opportunity to simultaneously improve access, reduce costs, and legitimize diverse voices through the production of high-quality educational materials available through Creative Commons licensing as free online resources. The ability to adapt and remix content from a variety of other open sources and the potential involvement of students in the creation process also enhances the opportunity to improve the representation of traditionally minoritized and marginalized voices and add critical analysis from a gender lens. Leveraging the work of feminist scholars Catherine D’Ignazio and Lauren F. Klein (2020), citation analysis is utilized to examine the gender distribution represented in the transportation planning OER available through the Massachusetts Institute of Technology (MIT) Open Courseware.

Initial analyses point to a continued gender gap in citing the work of female scholars in transportation planning. Expanding inclusivity in transportation planning OER will require an intentional focus on producing and promoting content written by gender minorities that centers or mainstreams their research and experiences and thus expands inclusive considerations of gender into planning workplaces and practice (Ryan, 2019). For the unique needs of all genders to be equitably addressed in the outcomes of the planning process, historically marginalized voices will need to be amplified in the research literature that comprises the foundation of training and education. Though a gap persists, OER still represents the greatest opportunity for a more equitable representation of historically marginalized gender identities and the corresponding prospect to improve quality of life through
equitable planning practices.

Citations


Key Words: Open Educational Resources, Citation Analysis, Equity

EXPECTATION TO PERFORM COMMUNITY ENGAGEMENT TASKS FROM WOMEN OF COLOR IN URBAN PLANNING PRACTICE: A GIFT OR A BURDEN?

Abstract ID: 1183
Research in Motion (RiM)

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Community engagement has been underrated in urban planning practice. What is required by law or policies in the United States does not go much beyond holding a public hearing before adopting a plan (Brody et al., 2003). Although advisory model, collaborative planning model, and consensus building model are intertwined in current practices of public participation in urban planning (Godschalk et al., 2003), less demanding public hearings are often preferred over lengthy community engagement processes. Therefore, community engagement is often seen as an unnecessary task by many practitioners.

The early participation of women in urban planning was primarily through facilitating community engagement. However, women’s participation in urban planning practice has also been problematic. First, their volunteer work in women’s clubs (municipal housekeeping) and their beautification efforts were undervalued. Later, their professional urban planning work was described as nontraditional (according to the 1986 survey of Association of Collegiate Schools of Planning as reported by Glasmeier and Kahn, 1989; according to the 2006 APA survey as reported by Dalton, 2007; and according to the 2016 APA survey), possibly referring to the association between women and community engagement in urban planning.

Among the myriad of challenges faced by the people of color practicing urban planning, one typical experience is that as the only person of color in most work settings, they are expected to represent and communicate with the groups of their own race/ethnicity (Garcia et al., 2021). Recent research shows that the disconnect between urban planning education and the diversity of the communities urban planners serve could be one of the contributing factors to this problem. The intersection of race/ethnicity and gender places women of color as the group to perform the community engagement tasks especially when they practice urban planning where communities of color reside.

The purpose of this study is to understand how women of color who practice urban planning in California address the expectations to perform community engagement tasks in their own practice. A total of 20 semi-structured interviews were conducted with women of color who practice urban planning in California in the public sector, in private firms, and in nonprofit organizations.

The findings suggest that although the women of color who participated in this study report the wish to serve communities of color was one of the motives for their choice of urban planning practice, the disadvantages of
being expected to perform community engagement tasks exclusively often balances the fulfillment they feel when
community engagement tasks they perform yield improvements in communities of color.

One of the implications of this study is for urban planning practitioners to support the imminent paradigm shift in
urban planning by making engagement with communities of color one of the central tenets of their practice.
Another implication of this study is the need for a better alignment between urban planning education and
practice so that engagement with communities of color is normalized for all students of urban planning before
they graduate.

Citations

- Dalton, L. (2007). Preparing Planners for the Breadth of Practice: What We Need to Know Depends on
  Duck”: The Experiences of African American/Black and Hispanic/Latin/o/a/x Planning Practitioners.
  formation: Challenges for comprehensive planning. Journal of Environmental Planning and Management,
  46(5), 733-754.
  Education and Research, 9(1), 5-17.

Key Words: Women of color, Urban planning practice, Community engagement, Public participation
EMERGENCY RENTAL ASSISTANCE: ASSESSING IMMEDIATE AND NEAR-TERM OUTCOMES FOR PLANNERS AND POLICYMAKERS
Pre-Organized Session 68 - Summary
Session Includes 750, 751, 752, 753

In response to COVID-19, the federal government allocated $46 billion in emergency rental assistance to keep vulnerable tenants housed. Throughout the country, state and local policymakers designed and rolled out large-scale Emergency Rental Assistance Programs (ERAP) in the middle of the pandemic often relying on expertise of community-based organizations. This panel brings together a set of papers that analyze how ERAP played out in practice and what outcomes and other institutional changes it brought. We ask whether ERAP made a difference to tenants, to landlords, to local tenant protections and to nonprofit capacity. Each paper grapples with outcomes in different ways and the panel explores outcomes in broad terms. Who did ERAP help: tenants or landlords or other stakeholders? Was it successful in curbing evictions? Did it seed and grow new eviction diversion programs and other tenant protections and will those new infrastructures last in the post-ERAP landscape? Did it increase the capacity of community-based organizations and local government beyond immediate program dissemination?

Objectives:

- To understand how ERAP played out in practice in different parts of the country
- To understand the impact of ERAP, broadly defined and what it means for planners

HOW DURABLE ARE THE CAPACITY GAINS MADE BY COMMUNITY-BASED ORGANIZATIONS DURING THE COVID-19 PANDEMIC? INSIGHTS FROM THE EMERGENCY RENTAL ASSISTANCE PROGRAM
Abstract ID: 750
Abstract within Pre-Organized Session 68

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In response to the onset of the COVID-19 pandemic and the economic shocks that followed, the federal government made an unprecedented $46.5 billion available to help keep renters housed. The Treasury Department allocated aid to states and large municipalities across the country and allowed a great deal of flexibility in how jurisdictions developed programs to disburse emergency rental assistance. A range of different approaches emerged, reflecting, at least in part, the variability that exists across jurisdictions in terms of governmental and local institutional capacity to standup such a large program amid urgent need.

Research has pointed to the important role community-based organizations (CBOs) played in deploying emergency rental assistance (Aiken et. al., 2022), and how uneven that capacity is in different communities, particularly in hard hit and persistently struggling areas (Kneebone and Underriner, 2022). Many CBOs partnering on emergency rental assistance deployment were able to extend their capacity to implement the program (Aiken et. al., 2021).
For instance, interviews with stakeholders involved in 21 different ERA programs from across the country found that CBOs strategically adjusted staffing (with higher-capacity, more-resourced organizations more likely to have added permanent staff), leveraged collaborations across jurisdictions and service areas, and strengthened their technological infrastructure (Kneebone, 2022). CBO staffers hoped that at least some elements of their extended capacity and ability to stabilize renters at risk of eviction could continue beyond the pandemic. However, interviewees also expected to have to scale back considerably once pandemic-era funds ran out and voiced uncertainty about the extent to which and how the partnerships and infrastructure they had built during the pandemic would persist.

This analysis draws on follow-up interviews with dozens of CBO staff from across the country who were involved with the deployment of emergency rental assistance but have now exhausted those funds. These interviewees represent communities that span the urban-rural continuum (including large cities, suburban counties, and rural areas) and emergency rental assistance programs that ranged considerably in size (from urban jurisdictions dispersing well over $100 million in ERAP to rural communities with subgrants from their state of $1 million). The findings of this analysis shed light on what dimensions of rental assistance, eviction prevention, and expanded capacity have been maintained and how capacity extensions and related services may have diminished or evolved without COVID-era funding. These findings offer insights into emerging lessons on how localities are adapting to address housing instability and eviction risk post-COVID as well as gaps in services and assistance that may be exacerbated amid an uneven landscape of resources and institutional capacity.

Citations


Key Words: community-based organizations, institutional collaboration, capacity, rent relief, housing stability

EMERGENCY RENTAL ASSISTANCE UNDER COVID CAPITALISM: A CASE STUDY ASSESSMENT OF STATE AND LOCAL RENT RELIEF PROGRAMS

To help address housing insecurity during the Covid-19 pandemic, state and local governments implemented an unprecedented rapid rollout of emergency rental assistance (ERA) programs. Little research has critically examined these diverse policies comprehensively through a lens that includes both tenant and other stakeholder perspectives as well as a consideration of the broader historical and structural context. Focusing on Connecticut as
a case study, we explore how the programs were designed, how they were rolled out, and how they were experienced by housing-insecure tenants at risk of eviction. We consider multiple types of evidence including 34 interviews conducted with tenants at risk of eviction during the first wave of ERA programs’ rollout; interviews with stakeholders such as landlords, advocates, activists, and application service providers; policies’ terms and criteria; and media accounts of programs’ rollout and impacts. Beyond considering programs’ impacts and challenges, we use a critical urban theory lens (Brenner, 2009) to assess their logics and approach, with attention to how they might reproduce unjust arrangements. That is, we interrogate the very premise of ERA: that Covid-19 caused an exceptional moment of a housing and health crisis, and that reform to address this crisis was possible within the structure of the current housing system (Bhattacharya & Dale, 2020; Madden, 2020). We find that programs’ transformative potential and short-term impact was hindered as they failed to challenge the speculative capitalist nature of our housing system that fueled unaffordability.

The programs were an important source of relief for renters, were less burdensome than prior assistance programs, and did meaningfully address administrative issues to improve effectiveness over time. However, we observe subjective and paternalistic design decisions around who was worthy of help and how much they deserve, coupled with administrative burden on multiple levels suggestive of bureaucratic disentitlement (Lipsky, 1984). Accordingly, tenants with urgent need frequently experienced severe difficulties and delays, or were unable to obtain assistance altogether. Further, programs’ dual purpose, assisting tenants while protecting landlords’ profits and property, generated tensions. Ultimately, the programs were not designed to address the pre-existing crisis caused by a speculative profit-oriented housing system, which Covid-19 merely exposed and exacerbated – fundamentally working within it, rather than challenging it and seeking structural change that would benefit tenants collectively.

Citations


Key Words: eviction, housing policy, Covid-19, rental assistance

DID OREGON'S EMERGENCY RENTAL ASSISTANCE PROGRAM AND 'SAFE HARBOR' POLICY FORESTALL EVICTIONS?
Abstract ID: 752
Abstract within Pre-Organized Session 68

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When federal and local eviction moratoria ended in July 2021, it quickly became clear that the timeline from application to the distribution of rent assistance was much longer than the timeline of the eviction process in Oregon. To forestall evictions, Oregon’s Emergency Rental Assistance Program (OERAP) was implemented alongside an extended tenant-protection-policy, ‘Safe Harbor’. In order for OERAP to prevent an eviction, a tenant who had submitted a funding application could claim ‘safe harbor’ to “set over” or reschedule an eviction case hearing to a later date (eventually up to 10 months away). This study offers insight into how to address the
timeline mismatch between eviction proceedings, which are typically very fast, and application, processing, and disbursement of rent assistance. We use mixed methods to assess how the program played out in cases filed in Multnomah County (Portland), Oregon between November 2021 - March 2022. How did tenants navigate the many steps required of them to secure ‘safe harbor’ while at the same time avoiding the many procedural pitfalls of eviction cases? How did court officials interpret, implement, uphold and/or undermine ‘safe harbor’? How did landlords and their legal representatives engage with or create obstacles to tenants seeking and obtaining ‘safe harbor’?

This study employs data from the Oregon Judicial Case Information Network (OJCIN), which records all the events in eviction court, additional information to interpret cases supplied in a partnership with legal service providers, and a court observation dataset compiled by community-court-observers who worked with the research team to develop instruments and inter-rater reliability. This paper takes a phronetic social science approach, with an emphasis on the everyday communications, decisions, and activities through which policy is carried out, with particular attention to power dynamics. This approach builds on Bates (2022) finding that the early implementation of OERAP and ‘safe harbor’ did not reach all tenants whose eviction cases should have been diverted. The results of this study show that, while there was a need to address the extended timelines of OERAP processing, the effectiveness of ‘safe harbor’ was limited. The policy rescheduled case hearings; resulting in multiple court appearances for tenants that increase opportunities for being evicted by default for failing to appear at/on time for a hearing. There was uneven interpretation of what the landlord or court would accept as “proof of application” to trigger the ‘safe harbor’. Cases that should have been eligible for ‘safe harbor’ protection were pushed into negotiation for a stipulated agreement, in which landlords could circumvent the ‘safe harbor’ set-overs despite tenant eligibility. With fewer than 10% of tenants represented by attorneys, many were not able to navigate the specific court procedures required to claim ‘safe harbor.’

Given the very lengthy delays in Oregon’s processing and disbursement of rent assistance in the OERAP program, the challenges for tenants seeking a ‘safe harbor’ pause meant the financial support might address tenant arrears without actually diverting an eviction for nonpayment. In order to address the capacity problems in the state’s rent assistance program that created several months-long wait times for applicants, Oregon added a mechanism to temporarily pause legal proceedings in eviction court. The state’s attempt to protect tenants in court was primarily activated by the tenants’ own actions in a complicated, technical and power-laden system, in which many people lack the knowledge or capacity to benefit. We conclude by considering how research that assesses the challenges of rent assistance and the eviction process from the perspective of tenants navigating these systems can provide insights into how to design, implement, and evaluate programs to better prevent displacement.

Citations


Key Words: Eviction, Safe Harbor, Tenant protections, Oregon, Rental assistance

HOW DID ERAP AFFECT THE LOCAL HOUSING LANDSCAPE? A CASE STUDY OF INSTITUTIONAL CHANGES IN TENANT PROTECTIONS AND PROGRAMS IN THREE CITIES
Abstract ID: 753
The federal government allocated an unprecedented $46 billion to emergency rental assistance programs during the COVID-19 pandemic to keep people in their homes. In this paper we focus on how emergency rental assistance programs (ERAP) have impacted local structures and institutions serving low-income tenants and offering protections from eviction. Specifically, we explore how the influx of large-scale emergency rent relief programs operating during the COVID-19 pandemic in three American cities – Philadelphia, Chicago and Los Angeles – have shaped and changed local eviction prevention and tenant protection programs and practices. This paper builds on a nascent body of research on outcomes from ERA programs that generally finds the program helped to keep people housed, reduced rental arrears, and that it served those it was intended to serve (Reina & Lee, forthcoming; Aiken et al. 2022).

The paper uses a temporal case study approach that looks at the eviction and tenant support policy landscape in each city before the onset of COVID-19, explores how the ERAP program impacted or changed those programs and structures, and then whether there are lasting changes in local policy regimes as a result of ERAP. In each City, we conduct 5-8 interviews with local program administrators and related stakeholders engaged in the courts, in local mediation programs, or in tenant protections. We are especially interested in understanding how the emergency rental assistance program intersected with the local court systems and the steps that cities took to tie the use of ERAP to eviction mitigation. By analyzing these intersections in three different cities, our aim is to better understand whether and how ERAP has altered the policy landscape and what new possibilities and challenges this provides for planners interested in eviction diversion specifically, and more generally in the realm of possible programming in support of low-income tenants.

This paper leverages four years of close partnership and research on emergency rental assistance programs operating in Philadelphia and Los Angeles. The Housing Initiative at Penn (HIP) has been closely engaged with program administrators planning, launching, adjusting and re-adjusting emergency rental assistance programs (ERAPs) in Philadelphia and Los Angeles.

Citations


Key Words: emergency rental assistance, housing

**KEEPING SHELTERS IN PLACE: THE ROLE OF NON-INSTITUTIONAL LANDLORDS IN PROVISION OF RENTAL HOUSING**

Pre-Organized Session 70 - Summary
Session Includes 690, 692, 693, 971

Rental housing occupies a significant portion of the housing stock in US metropolitan areas, yet researchers know very little about the characteristics of the entities that own those properties and determine housing supply, rents,
and the conditions of buildings and units. Resiliency, the ability to withstand and recover from a disaster or a shock, is shaped by the conditions of the local housing market and the associated regulatory environment. However, it is also shaped by the behaviors of the landlord population operating within that milieu. Absent knowledge about landlord characteristics, behaviors, and needs, cities and policy makers responding to disasters will be uncertain how to stabilize rental markets, keep renters housed, deliver meaningful assistance to property owners, and plan for post-disaster recovery. The papers in this panel are authored by members of a NSF-funded team of researchers working together to identify, survey and interview residential rental property owners (RRPOs) in nine cities to better understand their role in ongoing provision of rental housing.

Objectives:

- understand importance of understanding views of rental property owners to meeting local housing needs
- understand key factors shaping rental property owners’ investment decisions
- understand challenges to partnering with private rental property owners to meet local housing needs

"THE KEY IS TO TAKE GOOD CARE OF YOUR TENANTS": OWNERS’ PERCEPTIONS OF BENEFITS AND TRADE-OFFS OF LONG TERM TENANCY

Abstract ID: 690
Abstract within Pre-Organized Session 70

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For renters, having confidence that you will be able to stay in your home in the future—security of tenure—ensures the benefits of being stably housed and is a key demand of those advocating and working to define what constitutes a right to housing. Yet for the majority of renters, who live in locations that provide a limited supply of either subsidized housing or where neither rent control nor tenant protections support long term tenancy, such confidence is rare. At the same time, some recent research suggests that some investor owners design their residential rental business in order to profit from high turnover. Recent research finds that up to 40 percent of moves by renters are involuntary.

In this paper, we investigate the motivations of non-institutional owners who have rented properties to tenants for what they consider to be a long term. By non-institutional we mean owners who actively participate in the ownership or management of individual properties (as opposed to passive, investor-owners). Our central research question is: How and under what conditions do residential rental property owners (RRPOs) work to retain tenants over a long period? We hypothesize that RRPOs view particular types of tenants as desirable to retain and are willing to balance their desire to make a profit on their rental properties against other kinds of benefits they perceive to stability in their tenant population. Data for this paper was gathered through open-ended comments provided in responses to a survey of non-institutional RRPOs in 9 cities and follow up interviews with a subset of survey respondents. More than 15 percent of respondents entered comments in response to an open-ended question about their experience as a RRPO, and many specifically mentioned the value they placed on having long term tenants, often indicating that their experiences as RRPOs were unusual because of the length of time and relationships they enjoyed with their tenants. In our follow-up interviews, we ask these RRPOs to tell us the story of their rental property business, including their motivations for becoming RRPOs, and also their approach to managing and maintaining their properties, including tenant screening. We then discuss with them how important long-term tenancy is to them as owners or managers of their property, what the benefits are to them or to their business, and how they support or encourage long term tenancy. We focus on their relationship with and their views on desirable long-term tenants. Finally, we discuss their views on how local policy could support (or deter) long term tenancy, particularly of low-income tenants.
As cities struggle to prevent displacement of low-income renters, and to target the scarce resources at their disposal for construction or preservation of affordable housing, identifying new strategies for keeping low income tenants securely housed is important. Yet it will also be important to determine to what extent the goals and motivations of RRPOs interested in reducing tenant turnover align with public goals.

Citations


Key Words: renters, housing security, landlords, displacement, tenure

WHO PAYS THE PRICE? AN INVESTIGATION INTO HOW RESIDENTIAL RENTAL PROPERTY OWNERS RESPOND TO LOCAL SYSTEMS FOR PROPERTY TAX ASSESSMENT.

Economic trends that have intensified since the COVID-19 pandemic threaten the property tax’s long-held status as the good tax and its reliability as the basis for local city revenues. As industries and businesses continue shifting to remote employment patterns, the fiscal burden of property taxes will increasingly fall to residential property owners, disproportionately affecting certain demographic groups and certain classifications of property that are already overtaxed. A review of the literature reveals debates about enduring patterns of under/over assessment and how property tax assessment has been used as a tool to maintain political advantage and class, race, ethnic, and housing tenure-based hierarchies; however, these debates have generally taken place outside the field of planning. As a result, planners are left with gaps in their understanding how the externalities of housing policies affect residential rental property owners (RRPOs) and renters alike in the unique contexts of local assessment structures.

This paper asks the question: who pays the price? While rental property owners have an experiential understanding of tax incidence as the entity making the direct tax payments, the same question may be incorrectly settled within the minds of renters who believe (falsely) that the tax does not fall onto them. Drawing from survey data, interviews with RRPOs, and secondary data regarding local property tax regimes, we investigate how property tax incidence is perceived by RRPOs in nine U.S. cities: Minneapolis, MN; Cleveland, OH; Tampa, FL; Miami, FL; Des Moines, IA; Austin, TX; Dallas, TX; Houston, TX; and New Orleans, LA, and how changes in local property tax assessment structures affect the ways they operate their businesses, including rent setting. While appreciation of property taxes was absent in the survey responses of RRPOs, neither were they universally opposed. The study findings demonstrate the complexities and nuances of the ways that residential property owners respond to property taxes. When considering who pays the price for property taxes related to residential rental properties, this paper investigates the different perceptions of RRPOs, the differing property tax regimes in the cities where they operate their businesses, and concludes under what conditions it is the city that pays the
BUYING AND SELLING: EXPLORING NON-INSTITUTIONAL LANDLORDS’ ACQUISITION AND DISPOSITION DECISIONS
Abstract ID: 693
Abstract within Pre-Organized Session 70

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In this paper, we examine non-institutional rental landlords’ decisions to buy and sell investment properties. We use the results of a new survey of owners of rental properties in nine major US cities. In it, we ask respondents about their demographic and economic backgrounds, rental portfolios, and business management practices. We also ask several questions about their plans to acquire new investments or sell properties currently in their portfolio. We use these data to specify a series of regressions examining the factors that shape owners’ decisions to grow or shrink their businesses. We focus our analysis on three sets of associations. First, we examine whether market conditions impact acquisition and disposition decisions. We include economic factors such as rent and property price appreciation, natural disasters, government regulations, and other external shocks. Second, we examine the impact of owner economic, demographic, and lifecycle considerations on investment behavior. Finally, we examine how business performance and operational challenges impact owners’ portfolio decisions. The results of this analysis contribute to a growing body of research on the businesses of small rental property owners and the impact of their behavior on the rental housing system.

Citations


Key Words: Landlords, Rental Housing, Purchasing
Abstract within Pre-Organized Session 70

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The past decade has seen a rapid increase in corporate and institutional investor market share of property ownership in the United States’ rental housing market, especially single-family rentals (SFR). Their performance as landlords has raised questions about equity, displacement, and housing conditions in both popular media and academic studies (Raymond et al. 2018). These institutional landlords are often compared to small, local “mom-and-pop” owners, who used to make up >80% of landlords in 2001, and still owned a plurality (41%) of U.S. rental units in 2018 (Ferrer 2018). These small owners are often regarded by planners and housing policy practitioners as preservers of naturally occurring affordable housing (NOAH), who know their tenants personally, understand their plight, often charge below market rents, and attempt to upkeep their properties as if they lived there themselves (which they sometimes do) (Travis 2019). However, empirical evidence on these claims is sorely lacking. This paper seeks to fill this gap, asking whether there is a difference in affordability and habitability outcomes between different owner types: small, local, non-corporatized owners versus large, institutional or corporate owners. The analysis focuses on multifamily rental properties in metropolitan regions of California. The analysis uses parcel and assessor data from Regrid, CoreLogic, and public sources, cross-checked against secretary of state business filings, to categorize owners by scale, size, and sophistication. Then, neighborhood-level changes in small owner share are compared to rent changes to derive affordability impacts. Next, property habitability is assessed using metrics on code and rent control violations, evictions, foreclosure, and renovation, and compared against owner type. Together, these measures will provide an unparalleled assessment of rental owner characteristics on affordability and habitability of US rental stock. This paper also provides a replicable methodology for use in other regions and states.

Citations


Key Words: Landlords, Small multifamily, Habitability, Affordability, Ownership

INVESTOR-OWNED SINGLE-FAMILY RENTALS
Pre-Organized Session 76 - Summary
Session Includes 889, 890, 891, 892

There has been a tremendous growth in investor-owned single family rentals since the Global Financial Crisis. Investor-ownership has been associated with a range of adverse effects for tenants, including elevated prices and eviction rates. There is also concern that this form of ownership is associated with lower levels of maintenance and greater neighborhood instability. This panel brings together research teams from across the country investigating the prevalence, geography, and effects of investor-ownership of single-family homes in urban housing markets. Specifically, the papers in this session look at a) rent levels, code violations, and eviction rates across landlord types, isolating the record of large investors, b) the geography of different institutional investor firms by neighborhood racial characteristics and home value categories, c) the structure of investor markets that emerge in underserved communities, and d) rent levels by investor type. Each of the research teams in this session have developed innovative approaches to overcoming the difficulties of identifying and then researching investor owners.
Objectives:

- What are the market impacts of investor owned single family homes?
- What are the connections between institutional single-family rentals and racial capitalism?
- How does the institutional investor market organize itself spatially?

DOES SIZE MATTER? RENTS AND INVESTOR-OWNED SINGLE-FAMILY RENTALS IN MINNEAPOLIS

Abstract ID: 889
Abstract within Pre-Organized Session 76

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Since the Great Recession, large investors have become major players in the single family rental market. While much of the existing literature has focused on larger publicly traded REITs, less is known and understood about the variety of actors and investor types that exist within this emerging ecosystem. This paper seeks to expand on the work of Colburn et al. (2021) and Raymond et al. (2016) to better understand the outcomes and effects of different types of single-family landlords.

Research by the Federal Reserve Bank of Minneapolis and the Urban Institute has shown investor-owners have concentrated their purchasing in lower-income Twin Cities neighborhoods (Freemark et al. 2021; Ky et al. 2023). Previous research has also shown that investor-owners are associated with higher rates of eviction, displacement, and higher neighborhood-level rents (Raymond et al. 2016; Mills et al. 2019). However, to our knowledge, there is not any research directly connecting investor-ownership to building-level rents.

For this paper, we utilize an investor typology developed by Mills et al. (2019) to classify single-family landlords by their portfolio size and firm type within the Minneapolis-St. Paul metro area. Then we connect data on ownership to a proprietary dataset on rental listings. Utilizing multivariate regression to control for individual property and neighborhood characteristics, we test the hypothesis that different landlord types use different rent setting strategies. In addition, the longitudinal nature of both the ownership dataset and the rental listings allow us to use multi-period difference-in-difference models to test the causal relationship between a change in ownership structure to changes in rent. We also examine the correlation of owner type and habitability measures including evictions and building code violations.

This research has implications for both how we understand the strategies of different types of single-family landlords as well as how and to what extent institutional investors, in particular, may differentially set rents compared to local actors. Given the geography of investor-owned single family homes in the Twin Cities, these results may have important racial equity implications as well.

Citations


Key Words: institutional investors, single-family rental, eviction, quantitative methods

THE INTER- AND INTRA-METROPOLITAN GEOGRAPHIES OF LARGE CORPORATE SINGLE-FAMILY LANDLORDS
Abstract ID: 890
Abstract within Pre-Organized Session 76

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In the wake of the foreclosure crisis, institutional investors purchased thousands of homes across the United States, positioning them as individual units in large multi-metropolitan rental portfolios (Fields, 2018). These entities have been linked to a number of negative outcomes, including escalating rents and swift eviction actions (Raymond et al., 2018; Seymour & Akers, 2021). While smaller, so-called “mom and pop” landlords typically rent their former homes to supplement their income, institutional investors operate in order to generate competitive returns, leading them to charge higher rents and stack fees and fines to increase revenues.

While the geography of the four largest rental-home landlords have been the subject of prior research (Charles, 2020; Colburn et al., 2021), this research sheds light on a larger set of institutional landlords, including private equity-backed firms and post-crisis contract sellers. Our work considers the broad spectrum of institutional investors in rental homes, whose properties, tenantry, and business models are shaped by different housing market conditions. In weak markets like Detroit, investors purchased highly distressed homes and used contract sales and rent-to-own models to assign tenant/buyers responsibility for home maintenance. In stronger markets, investors repositioned formerly owned homes to rent them to households who would otherwise be first-time homebuyers.

Drawing on a national dataset of real estate transaction records from 2010 to mid-2017, we examine the inter- and intra-metropolitan geography of this broader set of actors. We developed a list of corporate aliases and mailing addresses linked to large institutional investors and real estate investment companies operating in multiple states or dominating individual markets. Using the geographic coordinates for these properties, we identified their census tract and metropolitan-area characteristics using the American Community Survey. Consistent with prior research, we find that the largest publicly traded entities concentrated their investment in growing Sunbelt metros, but we also find evidence of inter-metro specialization with some firms targeting relatively weaker-market metros. Relatedly, we find that large, publicly traded firms have concentrated investment in higher-value neighborhoods with larger shares of white residents. In contrast, private equity firms and contract sellers tend to concentrate in relatively lower-value neighborhoods with larger shares of Black residents. Results suggest different potential issues and implications for the investment patterns and practices of these different actors, from crowding out prospective homebuyers in desirable neighborhoods to racial targeting and possible fair housing issues, with each issue posing distinct policy implications.

Citations

Key Words: housing, corporate landlords, single-family rentals

“THE OIL BETWEEN THE BANKS AND REALITY:” RACIAL SEGREGATION AND THE EMERGENCE OF INVESTOR-DOMINATED HOUSING CIRCUITS
Abstract ID: 891
Abstract within Pre-Organized Session 76

JANG-TRETTIEN, Christine [Princeton University] christinejang@princeton.edu, presenting author

Racial segregation, combined with discriminatory financing, plays a large role in how properties are valued across Black and white neighborhoods. While most studies have focused on the impact of mortgage lenders, large amounts of money circulate outside of mortgage markets. Small lenders – undercapitalized, and often with small geographical reach – are integral to housing markets in poor, Black neighborhoods. Using 68 interviews with investors and ethnographic observations of real estate association meetings in Baltimore, I examine the networks of exchange that occur in the absence of mortgage lending. First, sales are arranged by “bird dogs” and “wholesalers” who profit by purchasing at below market value and selling for significantly more. Second, properties are sold to “flippers” and landlords in poor neighborhoods. Third, sales are financed by “hard-money lenders” who offer high-interest, short-term loans, encouraging projects that yield immediate profit. In sum, the market promotes instability by encouraging investors to adopt short time horizons, extracting value without investing it back into neighborhoods. These networks of exchange become mechanisms through which neighborhood decline occurs, significantly transforming the social and physical fabric of communities. Examining how these networks operate is critical to understanding the downstream effects of racially discriminatory laws and practices. It also brings into focus the racialization of money: differentially structured networks in Black and white neighborhoods means money yields vastly divergent results.

Citations


Key Words: housing, real estate investors, informality, credit

RENTING SECURITY: RACIAL CAPITALISM, FINANCIALIZATION, AND INSTITUTIONAL SINGLE-FAMILY RENTALS
Abstract ID: 892
Both scholarly and popular discussions of contemporary housing markets in the United States often invoke the idea of “crisis” to explain the depth of the documented decline in housing security, affordability, and accessibility. Using county parcel and sales data from fourteen North Carolina counties over nine years, we show that racialized dispossession is central to a “crisis-generated restructuring” project that stimulated renewed accumulation in housing and land markets following the financial crisis of the early twenty-first century. We investigate the demographic and geographic distribution of institutional single-family rental (ISFR) investor purchases and find that both publicly traded and private equity-backed ISFR investors were more likely to invest in census tracts with higher concentrations of Black residents, but private equity-backed ISFR investors target Black communities more aggressively than publicly traded companies. These residential areas are more likely to have lower price-rent ratios with lower sales prices and higher rents than whiter areas, allowing investors to more efficiently extract profits. We also show that ISFR investors may be furthering the crisis of rental affordability. Using propensity score matching, we find that at the end of the study period, median rents are $162 per month higher in census tracts with ISFR investment than in demographically and economically similar tracts without ISFR investment. Consequently, we argue that the current housing crisis in the United States is more appropriately described through a combination of two additional theoretical approaches that together point not only a structural ‘permanency’ but also the central role of spatialization and racialization: racial capitalism and housing financialization.

Citations


Key Words: single-family, rental, investors, financialization, race

Track 6 Roundtables

HOUSING THE US LATINA/O/X: EXPLORING THE 'PARADOXES' AND CLARIFYING THE SPECIFICITIES
Abstract ID: 680
Roundtable
The roundtable provides a platform for discussing the unique housing challenges faced by US Latina/o/x households with the hope of shaping a long-term research agenda for planning scholars. This community is estimated in the most recent decennial census as the largest single ethno-racial group in the country at 62.1 million individuals, having grown 23 percent since the previous census compared to the 4.3 percent growth in the non-Latina/o/x population. Further, Latinos make up a sizeable share of households in the US with their 18.4 million households are housed in 14 percent of the nation’s homes. Consequently, much attention has focused on the growing share of homeowners in this population as Latina/o/x household ownership rates approach their pre-Great Recession levels and on the simultaneous low rates of homelessness and housing assistance access in the midst of high housing-cost burdens and discrimination. This variation from other racial and ethnic groups has led to popular conceptions of a Latina/o/x housing “paradox”.

Yet, due to both its size and diversity of racial, ethnic, and geographic distribution in the US, however, the range of the Latina/o/x population’s housing conditions—affordability, access, quality, and contexts—requires additional exploration. For example, Latina/o/x renters face persistent discriminatory practices due to their ethnic background, inter-generational families, or documentation status. Latinos disproportionately occupy inadequate units particularly in rural communities and overcrowding in urban ones. These physical disparities become even more noticeable when considering contemporary expectations for housing performance beyond basic adequacy, such as energy-efficiency and disaster resilience.

Indeed, the limited supply of units and resulting cost burdens that are affecting all US households burden Latinos in specific ways. Public and civil interventions have focused alternately on the promotion of ownership opportunities, or on public assistance access. The patterns of urban, suburban, and rural settlement, segregation, and integration in US communities of all kinds is just coming into focus, likewise for tenure insecurity being a key determinant of housing access and quality. Considering how the unique demographic diversity of the Latina/o/x community particularly those of Black and Native racial backgrounds and mixed immigration status shapes access to housing resources, and the changing economic and social contexts in areas with high Latina/o/x concentrations such as Puerto Rico and the US, are certain to present dynamic housing conditions and outcomes in the long term.

This roundtable is structured to permit scholars working at different intervention points and with different methods around four central housing themes (affordability, access, quality, and contexts) to create broad strokes in the hope of presenting a concurrent planning research agenda.

Citations

EMERGING METHODOLOGIES FOR IDENTIFYING RESIDENTIAL RENTAL PROPERTY OWNERS

Abstract ID: 907
Roundtable

RONGERUDE, Jane [Iowa State University] jrong@iastate.edu, organizer, moderator
KUHLMANN, Daniel [University of Arizona] dok@arizona.edu, participant
AN, Brian [Georgia Institute of Technology] yan74@gatech.edu, participant
RODNYANSKY, Seva [Occidental College] srodnyansky@oxy.edu, participant
DAMIANO, Anthony [University of Minnesota] damia025@umn.edu, participant

Rental housing occupies a significant portion of the housing stock in metropolitan areas. Yet researchers know very little about the specific characteristics of the institutional and non-institutional entities that hold titles to those properties and determine housing supply, rents, and the conditions of both buildings and units. Regulatory environments and rental housing market dynamics also vary greatly across space, both within and between metropolitan regions. The individuals and entities that own residential property in Sacramento are not the same as those that own residential rental property in Des Moines or Atlanta. The buildings are different, the submarkets are different, the regulatory environments are different, the rents are different, and the residential rental property owners (RRPOs) themselves have different business models, investment strategies, available resources, and motivations for owning rental property. However, as researchers set out to fill the gaps in our existing knowledge about RRPOs, they must first face a significant hurdle: identifying which properties within a given jurisdiction are in fact rental properties, and then who exactly owns that unit and/or that building.

This panel brings together representatives from four research projects investigating residential rental property ownership. Their work cuts across different scales, utilizes different sources of data, and involves different models for identifying the owner or ownership entity of a building or rental housing unit. The session will begin with a description of each project. The participants will share their research questions, their methodology for identifying RRPOs, and their assessment of the effectiveness and limitations of their approach. Using a panel interview format, this roundtable session will provide the audience with the opportunity to engage with participating scholars in a discussion about the challenges and potential solutions for identifying residential rental property owners (RRPOs) and/or rental properties within housing markets in the US.

The four following projects have all committed to participate in the roundtable.

Dan Kuhlmann Lily Wang, GuanNan Wang: As part of a larger project surveying RRPOs, the project team developed and tested statistical (machine) learning methods and predictive models to identify potential rental properties from existing data sources. Their team first searched for variables correlating with housing tenure that were available and uniform across various jurisdictions. Based on these explanatory variables, the team considered several popular binary classifiers to create a predictive model to accurately identify potential RRPOs and used the model to guide the selection of survey participants. Uses data from regrid.com

Brian An, Eunjee Son: For this project, the team developed a methodology for identifying institutional investors in the single-family housing markets and then investigated their trends over the past 10 years in several major metropolitan areas. Their methodology allows them to capture both public and private REITs and private equity firms as well as regional market-oriented investment firms. Uses data from ZTRAX.

Seva Rodnyansky: This project studies the relationship between housing ownership type and scale, unit habitability, and neighborhood affordability across California’s major cities. Researchers measure how small owners (owners with 5 or fewer units, without LLCs) differ from larger, corporate owners on habitability with a focus on multifamily properties. The project methodology uses OpenRefine and cross-references with business registration data to differentiate between owner types.
Tony Damiano: For this project, the research team is utilizing Open Refine along with extensive hand cleaning of parcel data to better identify ownership clusters of investor-owned single-family homes. They then typologize landlords based on their portfolio size as well as investor type. Finally they join the cleaned parcel data to datasets related to building code violations, evictions, foreclosures and rental listings to analyze portfolio strategies and varying tenant outcomes by RRPO type.

Citations


Key Words: Rental Housing, Data science methodologies, Housing policy

Track 6 Individual Paper Submissions

MUTUAL ASSISTANCE OBSERVED AMONG RESIDENTS IN ELDERLY SHARED HOUSING

Abstract ID: 26
Individual Paper

MIYANO, Junko [Mukogawa women's university] miyano@mukogawa-u.ac.jp, presenting author
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Research question(s): In Elderly shared housing, unlike in a nursing home, relationships among residents are key to ensuring their continued residency. What specific types of mutual assistance do residents provide to one another?

Furthermore, what is the significance of residents engaging in such support?

Approach and methodology: Interview surveys for facility operators and residents were constructed primarily by the Elderly Group Living Management Council. The surveys included questionnaires and interviews. This author was mainly responsible for interview planning, and this research is based on an analysis of a portion of the interview responses.

Subjects of investigation: The investigation focused on seven of those EGL residences belonging to the Elderly Group Living Management Council which agreed to cooperate. The residences are located all over JAPAN. Years of operation ranged from 6 to 21 years. Resident counts ranged from 5 to 10 residents. The average length of residence ranged from 2.95 to 9.06 years, and the average nursing care level ranged from 0 to 0.88, which is
comparatively low and corresponds to able-bodied elderly individuals. Basic resident information was obtained from a questionnaire provided to EGL operators.

Investigation overview: Interviews were conducted by phone or with internet conference software (Zoom). Interviews were held either individually or in groups with residents. For group interviews, EGL operators were present. For individual interviews, EGL operators were not present but may have entered at times to provide equipment assistance, etc. Multiple researchers conducted the interviews. Semi-structured interview questions were used.

Overview of interview subjects: A total of 28 (51%) individuals were interviewed. The attributes of the interviewees corresponded highly to the resident population, with an average age of 83.7 years overall vs 83.3 years for interviewees, an average residence period of 5.51 years overall vs 5.53 for interviewees, and an average care level of 0.43 overall vs 0.58 for interviewees.

Meaningful and new findings: This study clarified the specifics of mutual assistance provided by residents to one another which contributes to their continued residency. While some of the support was comparable to that provided by staff, such as emergency response at night, other more subtle types of assistance that facilitated a personal connection among residents were observed, such as looking out for each other, casually providing information to residents with dementia, or loosening the lid on the fabric softener. These examples represent modest, considerate forms of mutual assistance that can only be provided by elderly people who share the same mental and physical abilities.

Citations

- MIYANO, Junko : The Early Attempts of Elderly Shared Housing in Japan and Its Habitation Limits for Elderly Residents, 13th ISAIA Conference _proceedings_, 2022,

Key Words: Elderly Group Living, Age in Place, Shared housing, Mutual assistance, Care Service Provider

ROOTS OF THE REVOLTS: CHRONIC DISPLACEMENT TRAUMA IN FERGUSON, BALTIMORE, AND BEYOND

Abstract ID: 28
Individual Paper

HYRA, Derek [American University] hyra@american.edu, presenting author

While many scholars assess aggressive policing, serial displacement, the forced removal and destruction of African-American communities, is a critical undercurrent of American unrest. By investigating the legacy of serial displacement in the St. Louis region and Baltimore, this presentation argues certain urban housing and community development policies over time perpetuate segregation, poverty concentration, and gentrification that create a contemporary context for aggressive policing, Black frustrations, and unrest. Police aggression is important to
understanding unrest; however, it can only be fully understood through an assessment of the intersection of policies that perpetuate serial displacement, neighborhood inequality, and chronic displacement trauma. My urban renewal unrest framework suggests housing policy reforms to increase community stability and “home” are needed to cultivate conditions of care and alleviate the pain of ongoing social exclusion.

Citations


Key Words: segregation, displacement, gentrification, unrest, race

LONG-TERM EFFECTS OF MOVING BACK TO PARENTS' HOME ON WEALTH AND HOMEOWNERSHIP

Abstract ID: 45
Individual Paper

CHOI, Seungbee [Virginia Polytechnic Institute and State University] sbchoi@vt.edu, presenting author

This study investigates the phenomenon of young adults returning to their parents' homes, commonly known as 'boomerang move,' and its impact on their long-term economic outcomes. With increasing financial challenges, many young adults have turned to their parents as a buffer against labor market shocks and high housing costs (Kaplan, 2012). While the short-term effects of boomerang moves have been examined in recent research (Chan et al., 2021: Choi, 2023), little is known about their long-term consequences. Using data from 2003-2019 waves of the National Longitudinal Survey of Youth 1997 Cohort, this study aims to investigate the impact of boomerang moves on wealth accumulation and homeownership at ages 30 and 35. Specifically, the study aims to answer three research questions: (1) Is there a relationship between the length of cohabitation with parents after boomerang move and wealth accumulation? (2) Does re-independence from parents lead to changes in labor market accessibility and income? (3) Is there a relationship between the length of cohabitation with parents after boomerang move and homeownership? The preliminary findings suggest that while cohabitation with parents may lead to reduced housing expenditures, it does not have a positive long-term effect on economic outcomes. Although low-income young adults tend to accumulate more wealth in the short term than those who maintain independent living, it does not necessarily lead to faster homeownership. The findings of this study provide important implications for policymakers and families alike, shedding light on the relationship between independent living, labor market accessibility, and the gradual impact on permanent income and homeownership.

Citations


Key Words: living arrangements, homeownership, young adults

A GEOSPATIAL ANALYSIS OF PENNSYLVANIA’S LOCALLY VARYING PROPERTY TAX COMPONENTS AND THEIR IMPLICATIONS FOR THE AGING IN PLACE OF OLDER PENNSYLVANIANS

Abstract ID: 83
Individual Paper

KIM, Jongwoong [West Chester University] jkim@wcupa.edu, presenting author

Using GIS (Geographic Information System) and spatial analysis techniques, this project will examine the geography of locally varied property tax components (e.g., common level ratio [CLR], local tax rate, and school tax rate) in Pennsylvania and their implications for older Pennsylvanians considering aging in place, especially those with limited financial means. In Pennsylvania, property taxes (on average, approximately 1.5% of home value) vary significantly from one county (or municipality) to the next. This is because each county in the state has its own property tax assessment system (e.g., a CLR that represents the ratio of assessed value to market value in a particular county), and a variety of tax authorities, including municipalities and school districts, determine tax rates. Meanwhile, there are many different options for thriving in later years (e.g., assisted living and care facilities), considering the highly diverse aging population in the United States (Vespa, 2018) in terms of their health, economic/financial, and social conditions (Golant, 2015). However, aging in place has been the most popular, dominant choice among older Americans, with at least two-thirds desiring to do so (American Planning Association, 2014). In these regards, prospective homebuyers and present homeowners must carefully consider how much property taxes they can and should afford, especially if they want to age in place (without recourse to, for example, reverse mortgages [Cocco & Lopes, 2020; Moulton, et al., 2016]). This is particularly essential for senior citizens and retirees wanting to age in place with limited financial resources, and yet, who are not qualified for the state property tax rebate or local property tax freeze programs, as housing prices and assessed values tend to rise with time. The resultant maps and tables will help uncover multiple implications of, for example, possible relocation decisions (as opposed to aging in place) of senior residents and Pennsylvania’s future housing and tax policy/research directions.

Citations


Key Words: Property tax, Aging in place, Housing affordability, Geographic Information System (GIS), Spatial analysis

MORTGAGE EXPERIENCE AMONG MINORITY AND SAME SEX BORROWERS IN THE UNITED STATES: EVIDENCE FROM THE NATIONAL SURVEY OF MORTGAGE ORIGINATIONS

Abstract ID: 90
Individual Paper

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This paper draws on the National Survey of Mortgage Originations (NSMO) to compare ethno-racial and sexual orientation variation in borrowers' knowledge and the types of adverse experience that mortgage holders receive during their mortgage closing. We assess the complex interaction between ethno-racial identifies, sexual orientation and adverse experiences during the mortgage closing. As part of the National Mortgage Database® (NMDB) program, NSMO is a nationally represented survey collected by the Federal Housing Finance Agency and the Consumer Financial Protection Bureau. NMDB combines administrative and credit data on recent mortgage originations and NSMO complements the core NMDB by surveying borrowers experience acquiring a mortgage. With the NSMO data, we are able to identify same-sex couple borrowers more accurately than any other administrative or survey data. We also have access to credit and administrative records on borrowers and their mortgages. Our results show that minority borrowers and minority same-sex couples had relatively less knowledge of mortgage elements at the beginning of the mortgage process compared to other groups. To evaluate mortgage closing experience, we estimate a logistic regression model of adverse surprises with a robust variance estimator. Our regression results indicate that minority and same-sex borrowers often faced significant adverse events during mortgage closing. On average, a minority same-sex couple was two times more likely to encounter an adverse surprise when compared to a non-minority opposite-sex couple controlling for borrower and loan characteristics. This paper also highlights the variation in adverse experiences during the mortgage closing, with same-sex couples and ethno-racial minority home-seekers more likely to face an unexpected financial cost during the mortgage closing. Our results have important implications for mortgage closing procedures and disclosure rules.

Citations


Key Words: mortgage, lending, disparity, identities, disclosure

REPUBLIC OF AFFLUENTS: ELITE INFORMALS AND THE CULTURAL PRODUCTION OF PROPERTY IN DELHI, INDIA
Abstract ID: 119
Individual Paper

MISHRA, Vivek [Northeastern University] mishra.v@northeastern.edu, presenting author

In 2019, the government of India identified 69 affluent unauthorized colonies (AUCs) in Delhi. The government defined category of “affluent unauthorized colonies” presents us with an officially quantified picture of elite informality in Indian cities. Further, these colonies were excluded from a legislation that granted ownership rights to 1731 low- and middle-income colonies. Despite the state’s ostensibly ambivalent posture towards their settlements these elite informals are able to exercise a relatively complete set of citizenship rights. In this paper I
examine the claim that the propertied class is able to experience full citizenship whereas the rights of the non-propertied class are constricted, eroded and conditional. This paper uses, Sainik Farm, an AUC in Delhi, to interrogate the ambiguous and contested relationship between the elites and the state. It asks, how do elite informals negotiate their citizenship rights when the state denies them formal rights to property? I conducted participant observation, more than 30 semi-structured interviews, and analyzed newspaper archives, government documents, and court cases. I found that the elites negotiate their citizenship rights through three interconnected practices - 1) Institutional practices, 2) Aesthetic and Spatial Practices, and 3) Ideological Practices. I call these practices ‘cultural production of property’ through which they retain membership of a class group and in turn maximize their citizenship experiences. I argue that these practices allow them to mimic elite formals who are able to make citizenship claims based on property rights, and distance themselves from those who are typically seen as squatters and the undeserving poor because of their informality. Hence, legal property rights, as opposed to what most of the existing literature on property rights and citizenship have argued, is not the only arbiter of citizenship. Rather, in the case of elite informals, citizenship is constructed through everyday socio-cultural and discursive practices. This paper suggests that while the legal aspect of property rights can be a powerful tool for the negotiation of citizenship rights, the everyday cultural production of property through class mobilization cannot be overlooked.

Citations


Key Words: Elite Informality, Property Rights, Urban Citizenship, Cultural Polis, Global South

PROMOTING LOCAL CONTROL AND SPATIAL INEQUALITY: GOVERNANCE AND DEVELOPMENT RATIONALITIES IN SOUTHERN CALIFORNIA

Abstract ID: 200
Individual Paper

REYES, Alejandra [University of California Irvine] ireyesru@uci.edu, presenting author

California was the first state in the United States to mandate local governments to plan for the housing needs of all residents over fifty years ago. Yet, similar to other US regions, fragmented governance, housing allocation disparities, enforcement limitations, and persistent barriers to low-income housing provision, have continued to promote economic and ethno-racial segregation throughout the state. Recent work has gravitated towards assessing housing allocation methodologies or implementation challenges in the Bay Area. Meanwhile, research examining governmental functions and the tensions and opportunities for harmonizing regional and local goals and governance is scarce. Further, recent legislation has increased local compliance pressures, presenting an opportunity to examine the evolution of municipal-state relations. Given contentious housing politics, pressing unaffordability, and heterogeneity among Orange County jurisdictions, one of two Los Angeles metropolitan area counties, this research 1) evaluates the county’s 34 cities in their support to low-income housing provision, and 2) gauges their reactions to recent state housing mandates through spatial analyses, a housing score composed of nineteen demographic and housing metrics, and the content analysis of local housing meetings in 2021, along
other relevant public accounts (i.e., public regional and civic meetings, newspaper articles, policy briefs, and reports).

Orange County’s conservative and anti-big government politics favor local control (e.g., strong adherence to exclusionary zoning) and allowing private actors (e.g., real estate developers, home owner associations, property owners, and private consultants) to have considerable influence in local governance and decision-making. Further, many Orange County cities have coalesced and remain highly engaged and influential in regional governance decisions, such as in the Southern California Association of Governments, pushing against state mandates to expand housing access. This analysis underscores prominent, persistent, and reactionary local resistance, evident in the legal battles launched by the county and several of its cities against the state, and their leading appeals rate against new housing allocations. Some cities even requested higher allocations for the densest, one of the lowest-income, and 76.8% Latinx city to the north of the county. While appeals were unsuccessful, the Orange County Council of Governments and the bulk of its cities sued the state over housing mandates only months before the deadline to submit their revised Housing Elements, a central component of their General Plans, in 2021. Some appealier cities are also among the most restrictive of low-income housing construction, least dense, higher-income, majority-white, least affordable, and along the coast or to the south of the county. In contrast, most northern OC cities (closest to Los Angeles County), the densest, lowest-income, minority-white, and most affordable, seem to be carrying the brunt of low-income housing provision through their management of subsidy programs and by permitting low-income housing development at higher rates.

Perhaps surprisingly and despite having developed as many other suburban regions in the US, several Orange County cities have also consolidated as economic and employment hubs, housing business complexes, the largest shopping malls in the state, and a University of California campus. Further, and notwithstanding its notably low housing allocations in the past, over 300% of the county’s above moderate-income or market-rate allocation, and close to 200% of its overall allocation got permitted during the past 8-year housing cycle (2014-2021). In contrast, Orange County notably underperforms in low-income housing production, with some cities permitting low-income development applications at notably low paces. Yet some of the most exclusive cities, both in terms of economic and ethno-racial segregation (with over 80% non-Hispanic white populations), also have high residential vacancy rates, subtracting power to calls for market-rate construction in affluent areas.

Citations


Key Words: housing, governance, Southern California

**HOW DOES EXPOSURE TO CLIMATE RISK CONTRIBUTE TO GENTRIFICATION?**

Abstract ID: 222

Individual Paper

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The growing frequency and intensity of extreme weather events are influencing people’s decision-making about the cities in which they will live in the future. The subsequent societal impacts of greater exposure to climate hazards require transformative action in coastal cities. However, few studies have considered the aggregate impacts of risk-induced household migration behavior. In this study, we employ a difference-in-differences framework to examine hurricane-prone coastal cities across the US to explore the cumulative consequences of residential migration in response to climate risk exposure. Our results indicate that the cumulative in-migration due to climate risks may cause demographic shifts in areas where climate risk is relatively low, increasing climate gentrification. Climate-risk-induced migration to low storm intensity areas is associated with a 13.8% increase in median income, while in-migration to lower flood-risk areas decreases non-Hispanic African American residents by 18.9%. These results suggest that state and local governments should promote effective local-level climate adaptations to address climate risks, not only to ensure urban sustainability in hazard-prone areas but also to curb potential social inequality in low-risk areas.

Citations


Key Words: risk-induced migration, gentrification, climate risk, hurricane, difference-in-differences

BACK TO THE SUBURBS? MILLENNIAL RESIDENTIAL LOCATIONS FROM THE GREAT RECESSION TO THE PANDEMIC

Abstract ID: 236
Individual Paper

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Ever since members of the Millennial generation aged into adulthood, there has been conjecture about how they will behave, where they will live, what services they will demand, and whether they differ from previous generations (Frey, 2018). Millennials, defined here as people born in 1977–1996, are not only the largest living generation in the United States but also considered to have unique tastes and lifestyles. Millennials’ preferences and behaviors have had and will have significant implications for neighborhoods across the country. Studies have found that Millennials lived in cities more than previous generations as they entered into housing and labor markets for the first time, and the same was true for Millennial first-time homebuyers. This pattern of Millennial mobility, especially among college graduates, influenced the ‘back to the city’ movement between 2000 and 2010. Millennials are still aging through young adulthood, however, which means that their residential mobility patterns are still being established.

Millennials have also differed from previous generations in the timing of traditional milestones like marriage, homebuying, and having kids, typically by delaying these milestones—if engaging in them at all. These delays may...
have influenced behaviors and manifested in a preference for high-amenity urban areas. With early Millennials aging into their 30s and 40s, however, there is the potential that more members of this generation may ‘catch up’ on these milestones, which could in turn change where Millennials live. Indeed, Myers (2016) suggested that the Millennial migration into inner-city districts was peaked in 2015, when the largest of the Millennial generation reached age 25, and their impacts on urban population growth would decline hereafter as they enter middle age and beyond. However, there have been relatively few studies investigating Millennial residential locations and its association with neighborhood characteristics when they make their transition into middle adulthood.

This paper explores how Millennial locations changed in the United States from 2011 to 2021, during the decade between the Great Recession and the COVID-19 pandemic, and compares how these locations differ from or mirror those of previous generations. Using U.S. Census data, we first categorize neighborhoods according to their degree of urban or suburban character, following Moos and Mendez (2015), as well as their geographic centrality or peripherality within metropolitan areas. Using these categories, we identify the types of neighborhoods where Millennial populations have grown the most during the recent decade and compare the mobility patterns with those among previous generations. In trying to understand why Millennials might be moving to certain types of neighborhoods, we look at the association between Millennial mobility and housing affordability, availability of amenities, and presence of family-sized housing.

The findings suggest that Millennials are largely suburbanizing similar to previous generations but with a slightly higher rate of urban living as they age. Central urban and peripheral urban neighborhoods largely lost Millennial residents from 2011 to 2021, while peripheral suburban neighborhoods experienced substantial gains. Although peripheral suburban neighborhoods with few amenities gained the most Millennials, their neighborhood amenities increased rapidly in such neighborhoods. We also find that Millennials appear to be migrating away from central urban neighborhoods that lack affordable or family-sized housing, a result that is consistent with the urban “youthification” hypothesis (Moos, 2016; Pfeiffer, et al., 2019). We conclude that this large and influential generation will continue to shape urban and suburban neighborhoods in the coming years, and planners will likely need to encourage affordable, right-sized housing and amenity development to attract and retain this population.

Citations


Key Words: Millennial generation, peak Millennials, residential location choice, central cities, suburbanisms

ENOUGH HOUSING FOR WORKERS? THE INCREASING NUMBER OF 'EMPTY WORKER' HOUSEHOLDS BY BABY BOOMER RETIREES AMID HOUSING SHORTAGE

Abstract ID: 294
Individual Paper
Regional planning seeks to balance housing supply and employment growth to meet the population’s housing needs. These factors are typically addressed in their aggregate totals, such as the concept of jobs-housing balance (Cervero, 1996). Transportation planning emphasizes encouraging the same jurisdiction for places of living and work to reduce commuting distance (Blumenberg & King, 2021; Salon et al., 2012). These studies predate the major impacts of Baby Boomer retirements that create many ‘empty worker’ households. The intersection of population, workers, and housing occurs within every occupied housing unit rather than a mere balancing of separate totals. It varies systematically by housing type and demographics of the householder.

It may be timely to examine the role of housing in providing shelter for workers. Recent studies have shown that the tight housing supply has driven up costs for residents and has driven down local residential mobility since the Great Recession (Myers et al., 2020). The relationship between labor migration and housing supply has long been discussed at the regional level. The influx of people creates a demand for housing in the region, driving up the housing cost if the housing supply is constrained (Saks, 2008). Despite the importance of housing planning in the labor market, scholars have not investigated the intricate balance between the number of workers and houses and its implication for the regional housing and labor markets.

This study examines the ratio between the number of workers and housing units by age group utilizing the American Community Survey Public Use Microdata Sets. The data provide information on the employment status and demographic characteristics of household members. We construct a new variable of the density of workers by counting the number of employed workers within a household and by classifying full and part-time workers. The study disaggregates households' employment and tenure status by age and household composition to relate labor force to occupied housing units.

It graphically visualizes a pattern of who lives in what types of housing and how many workers are sheltered in different household configurations. Our findings are that the growth of housing units in the United States has not caught up with that of workers after the Great Recession. The average annual growth of all workers was 1.5 percent from 2014 to 2019 in the U.S., whereas that of housing units was 0.8 percent. A startling, large and growing share of housing units—a quarter or more—are occupied by no workers at all. Conversely, another sizable, growing share is comprised of 3 or more workers. Analysis in Southern California is compared with the whole of the U.S.

The study reveals the role of demographic transition, aggravating supply constraints. A large wave of retiring Baby Boomers will drive these ‘empty worker’ households to greater prominence. Although we strongly support the rights of elderly Americans to age in place in their own homes, this underscores how more construction is required to house the new workers replacing the retirees. This study confirms the differential likelihood of having a certain number of workers in a household across age groups. As households advance to middle age groups, they tend to increase the density of workers to support their household members. Those in their 50s are most likely to have three or more workers, often including a husband, wife, and grown children, some of whom are part-time earning contributors. At retirement, they naturally reduce the density of workers and end up having no workers. Considering the immobility of the elderly, the young households of workers will be competing for a limited number of housing units.

Citations

NEGOTIATING THE EXCLUSIVE RIGHT TO PUBLIC SCHOOLS IN CHINA’S EDUCATION-FEATURED GATED COMMUNITIES UNDER MULTISCALAR AND MULTIDIRECTIONAL ENTREPRENEURIAL URBANISM

Abstract ID: 316
Individual Paper

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Adding to the proliferating literature of contemporary urban entrepreneurialism, this research examines the less documented multiscalar and multidirectional entrepreneurial governance occurring at the interface between the entrepreneurial local state, the privately governed gated communities (GCs) and individual homeowners/investor-citizens. In Chinese cities, fierce competition over quality education and the pursuit for quality living have given rise to ‘education-feated gated communities (edu-feated GCs)’ that package privileged access to K-12 schools with tailor-made residential services. Turning education from a public good into a club good that can be capitalised in the housing price and leveraged in urban (re)development, edu-feated GCs are highly sought after among homebuyers, developers, and local states, and thus become an important component of entrepreneurial urbanism. Owing to limited resources, local governments and developers cannot always meet the rising demands and expectations of homeowners as promised. GC Homeowners’ struggles for quality education are thus ubiquitous. This study introduces the conceptual lens of multiscalar and multidirectional urban entrepreneurialism, in which the semi-private governance mode of GCs forms the institutional basis for the ‘shareholding’ enterprise involving multiscalar actors and gives rise to the multidirectional entrepreneurial governance. Drawing on an empirical study in Guangzhou, a city that spearheaded edu-feated GCs development, this research examines how homeowners negotiate their exclusive right to public schools through intensive interactions with local authorities. The result is an unfolding of a multidirectional process of entrepreneurial governance building upon an effective feedback loop involving multiscalar actors and bottom-up entrepreneurial endeavours based on shareholder value.

Citations


Key Words: edu-feated gated community, public schools, multidirectionality, multiscalarity, entrepreneurial governance
Homeownership rate in the U.S. declined from its peak of 69 percent in 2006 to 64 percent in 2016, and is still about 3 percentage points below that peak. Most explanations focus on changes in lending standards and prevalence of subprime mortgages in the 2000s, which made homeownership more attainable, and the subsequent stringency of mortgage and credit standards in the 2010s, which limited access to housing finance for many. These explanations imply heterogeneity among different income groups, where higher-income homebuyers with little financial constraints are expected to have maintained access to financing and led the recovery in homeownership rates in the 2010s. The evidence, however, shows otherwise. Homeownership rates have declined and stagnated among higher-income families too. If financial qualifications are not an issue, what is?

One potential explanation for the decline is the increasing preference for living in urban areas where consumption amenities are more accessible—and homeownership is less affordable. This paper contributes to the urban revival literature by asking how much of the change in homeownership rates among higher-income families is explained by the growth in amenity values in the areas they choose to live. Specifically, I focus on renters who can afford the median property in their county of residence (“owner-ready” renters), and follow their simultaneous choices of location and tenure, in relation with characteristics of place.

The study sample is a longitudinal subset the Panel Study of Income Dynamics (PSID) family data, available biannually between 2001 and 2019. I define owner-ready renters as those who have enough income and savings to afford a standard mortgage for the median home in their county of residence. These families choose census tracts based on housing and commute costs and amenity values. First, the paper documents that annual hazard rates (of becoming homeowners) for owner-ready renters are significantly lower in the 2010s. Not considering any explanatory factors, average time-to-buy (TTB) among owner-ready families increases from 3.6 years in the 2000s to 5.1 years in the 2010s—a 43 percent delay.

Differences in mean TTB are then decomposed across the two time periods following the general Oaxaca-Blinder framework, estimated as the sum of structure (unexplained) and composition (explained) effects. Underlying elements predicting TTB include vectors of family-level attributes and census tract-level characteristics related to housing and amenity values. Amenities (the focus of the paper) are defined as density of jobs in retail, arts, food and drinks in census tracts. Preliminary results show that with the 2000s used as the reference period, composition (explained) effects account for almost two thirds (64 percent) of the difference in TTB between the two periods. Census tract housing characteristics demonstrate stronger explanatory powers in general. Among the amenity components, access to retail is strongest and accounts for 20 percent of the delay in TTB.

This paper enriches the literature by studying choices of location and tenure simultaneously. Findings shed light on the increasing polarization of urban neighborhoods based on amenities, and informs policies that address housing affordability and local economic transitions.

Citations

A NEW PICTURE OF SEGREGATION: A NATIONAL PUBLIC USE DATASET ON EXPERIENCED SEGREGATION IN THE UNITED STATES.
Abstract ID: 329
Individual Paper

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Segregation is a critical measure as it is closely linked to a range of social and economic outcomes, including access to educational and employment opportunities (Chetty et al., 2014; Cutler et al., 2008; Galster et al., 2010), health outcomes (Altschuler et al., 2004), and social cohesion (Abascal and Baldassarri, 2015). In particular, all federally subsidized affordable housing projects in the United States have a requirement to look beyond the affordability aspect of the program as part of the Affirmatively Furthering Fair Housing (AFFH) mandate passed in 2015 – a reinforcement of the 1964 Fair Housing Act – to promote income-mixing, desegregation, and access to opportunities through housing. However, current measurements of segregation that determine whether the AFFH is being upheld rely solely on demographic characteristics or geographic boundaries. By analyzing human mobility data, we can gain a more accurate understanding of how people move through and interact with different neighborhoods, and how segregation manifests itself in terms of actual patterns of movement, spatial accessibility, and interaction potential. This research creates measures of segregation along race and ethnicity dimensions using human mobility data from cell phone GPS locations. We examine the relationship between this “new picture” of segregation and residential segregation and find that experienced segregation remains highly determined by residential location. While most residential measures of segregation underestimate this new, fuller picture, we also find that in areas that are residentially very diverse, experienced segregation measures show less diverse interaction potential than what is projected by the Census.

Citations


Key Words: segregation, human mobility data, computational social science, public data

ON THE URBANIZATION OF FORCED DISPLACEMENT: THE CASE OF BERLIN, GERMANY
Abstract ID: 348
Individual Paper

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There is solid consensus today that forced displacement is urbanizing as refugees move from camps to cities. Historically, policies by the United Nations High Commissioner for Refugees (UNHCR) prioritized aid for displaced persons accommodated in camps, viewing encampment as an effective spatial mechanism to provide protection. Specifically, the tenuous materiality of camp structures signaled that situations of forced displacement were temporary, and the spatial isolation of the displaced to controlled geographies signaled that this temporary situation was being managed. In 2009, the UNHCR released a new global ‘Policy on Refugees in Urban Areas’, one which expands the space of protection and ensures that cities are recognized as legitimate places for aid (Crisp, 2017). However, planners are struggling with questions of how to interpret refugee protection in cities and through which spatial mechanisms. This paper focuses on the urban refugee population of Berlin, Germany, and seeks to understand how planners and other key actors and organizations have been interpreting urban refugee protection, specifically at the socio-spatial level. In 2015 and at the height of the Syrian war, the Chancellor of Germany at the time, Angela Merkel, uttered words that changed the face of the country: “We can do this”. By December 2022, Germany’s total refugee population had reached 2 million, making the country the largest refugee hub in Europe. For years, there has been concern over shrinking cities in Germany; opening the borders to displaced persons was seen by Merkel as a way of arresting that problem. However, the struggles over rental housing that have been happening in Berlin have only worsened over the last few years, and urban refugees today have become a significant part of the story. Empirically, the research investigates how spatial standards for urban refugee accommodation are produced and operationalized in Berlin. It concludes by providing lessons-learned with regards to how displaced persons access accommodation, and sometimes tenure-security, in a city that is dealing with a housing affordability crisis. I also provide early findings as to how urban refugee protection is being interpreted at the socio-spatial level. On the theorization of camps, there is no shortage of studies. Scholars across disciplines have gone to conceptualize camps as spaces of violence (Loescher and Milner, 2004), exception (Turner, 2005), hospitality (Ramadan, 2008), discipline and governmentality (Hyndman, 2000), identity (Malkki, 2008) and beyond. However, there remains much to be theorized on refugee accommodation in cities. Theoretically, this research hopes to build on the recent efforts of scholars working to create new avenues for theorizing about forced displacement in the urban context (Pasquetti and Sanyal et al., 2020). To explore these complex issues, I utilize a case study approach, drawing primarily on in-depth interviews with over twenty urban refugee households as well as a series of semi-structured interviews with public and non-governmental authorities in Berlin. I also resort to a review of documents and an analysis of spatial sites. While this research focuses on Berlin, I hope it can offer insights relevant to other cities dealing with the urbanization of forced displacement.

Citations


Key Words: forced displacement, refugee accommodation, urban refugees, housing affordability crisis, Berlin Germany

Evolving Institutional Actors in Post-Disaster Public Housing Residents Recovery: A Retrospective Study
Abstract ID: 355
The existing literature on public housing recovery focuses on different aspects of their recovery challenges but not enough on the governance and collaboration of actors who impact this process. Knowledge on this topic can help provide pathways for the strategic collaboration between these actors, their interventions, and their efforts to build the resilience of public housing residents. Given the prolonged recovery of public housing residents compared to other survivors of disasters, their social vulnerabilities, and their dependency on governmental resources, there is a need for research that outlines the policies, programs, plans, and actors’ role in the post-disaster public housing recovery. Hence, this study addresses this need by exploring evolving institutional actors in public housing recovery and how and why the recovery governance evolved for this community cohort.

This study investigates the post-disaster recovery of public housing residents in New Orleans in the aftermath of the 2005 Hurricane Katrina, Galveston after the 2008 Hurricane Ike, New York City after the 2012 Hurricane Sandy, Lumberton after the 2016 Hurricane Matthew, and Ponce after cascading disasters in Puerto Rico using case study collection approach. It explores the policies, programs, and plans as the legal infrastructure of governance and institutional actors as the procedural element of governance that impact the recovery of public housing residents. Data collection is conducted using archival research and secondary document review techniques through media content. Using databases such as newspapers, local offices’ websites, and peer-reviewed articles, it explores decisions and decision-making processes for the recovery of the public housing residents and the institutions involved in each process. These documents are analyzed using thematic content analysis. These themes lay out a schema of institutional actors and roles impacting the post-disaster recovery of public housing residents. This schema is categorized as types of roles (e.g., advocacy, funding, planning, etc.), disaster relevance (e.g., traditional or emerging), topical sector (e.g., housing construction, health, etc.), governance sector (e.g., public, private, nonprofit, quasi-governmental, Public Private Partnership), and interaction type (e.g., weak, or strong, opposite or supportive). This study also maps actors, policies, and policy planning processes in a structured manner to track linkages between institutional actors and policies.

Preliminary findings show a diversity of institutions, from governmental to nongovernmental and private sectors, and civic societies involved in the recovery processes. Based on the context, the role of nongovernmental entities is different and becomes more important during the time, specifically in marginalized communities. There is no predefined network for the collaboration of the entities, and there is a need to be reviewed for future public housing recovery planning. The plans, policies, and decisions are made under the pressure and dilemma of each disaster with a weak representation of public housing residents or housing advocacy groups. The findings act as a call for action to outline a network of actors for a more inclusive and equitable public housing recovery governance.

Citations


Key Words: Public housing recovery governance, Disaster, Retrospective study
CROSS-BORDER HIGH-SPEED RAILWAY’S IMPACT ON SHORT-TERM RENTAL HOUSING MARKET: A NATURAL EXPERIMENT STUDY ON YAU TSIM MONG, HONG KONG UNDER COVID-19
Abstract ID: 365
Individual Paper

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The Guangzhou–Shenzhen–Hong Kong High-speed Railway (i.e. HSR) connects mainland China and Hong Kong SAR. Thanks to the massive cross-border flows it brought, the HSR has greatly stimulated the rental housing market in Hong Kong. In transport economics, the relationship between transport and property prices has long been studied. Previous research, however, mainly focused on a single city market and barely studied cross-border market areas. Due to COVID-19, a natural experiment of controlling the cross-border transport between mainland China and Hong Kong SAR can be conducted. Thus, this article offers a longitudinal natural experiment study on the change of the Airbnb market in Hong Kong affected by the starting and suspending of the cross-border HSR. It was found that: 1) Listings that were not specialized in long-term rental services and of low accessibility were more likely to be eliminated after the shutdown of the HSR; 2) There is a spatial heterogeneity as for the spatial price elasticity, with Tsim Sha Tsui fluctuated the most strongly; 3) Low-end rental units of low accessibility have higher price elasticity. Traffic convenience and prices are no longer advantageous factors.

Citations


Key Words: Cross-Border High-speed Railway, Airbnb, Short-term rental housing market, natural experiment, Hong Kong

HOME-MADE BLUES: RESIDENTIAL CROWDING AND MENTAL HEALTH IN BEIJING, CHINA
Abstract ID: 368
Individual Paper

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Although residential crowding has many well-being implications, its connection to mental health is yet to be widely examined. Using survey data from 1613 residents in Beijing, China, we find that living in a crowded place – measured by both square metres per person and persons per bedroom – is significantly associated with a higher risk of depression. We test for the mechanisms of such associations and find that the residential crowding–depression link arises through increased living space-specific stress rather than increased life stress. We also identify the following subgroups that have relatively stronger residential crowding–depression associations: females, those living with children, those not living with parents, and those living in non-market housing units. Our findings show that inequality in living space among urban residents not only is an important social justice issue but also has health implications.

Citations

Key Words: Residential crowding, Living space, well-being, Health, China

MISMATCHES BETWEEN THE SUPPLY AND DEMAND OF PUBLIC RENTAL HOUSING IN CHINESE CITIES

Abstract ID: 369
Individual Paper

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Providing sufficient affordable housing for the poor is a worldwide challenge that every government faces. The COVID-19 pandemic has reinforced the critical role of social housing in providing stable, safe and affordable shelters to the vulnerable population. Contrary to the withdrawal of the State from social housing in much of the world under the neoliberalism, the Chinese government has significantly increased its role in the last decade with massive investment in public rental housing (PRH). However, the PRH program has often been criticized for being unable to supply sufficient units on the one hand and having a high vacancy rate on the other hand. This paper analyzes this paradox using a unique city-level database on public rental housing and land supply. We find that there are mismatches between the supply and demand in both quantity and quality, and there are various problems in the allocation of PRH.

Key findings are summarized below.

First, the supply of PRH is not based on the actual housing demand and there is a mismatch in the quantity of supply and demand of PRH. Cities with more crowded housing conditions and lower housing affordability, thus more demand, do not necessarily have more supply of PRH. On the contrary, cities with lower housing affordability actually have a smaller supply of PRH. These results indicate the failure of PRH supply to achieve its policy goal of meeting the basic housing needs of urban low- and middle-income households. Meanwhile, the supply of PRH is significantly associated with total residential land supply and the degree of local fiscal autonomy. While more residential land supply leads to more supply of PRH, a high fiscal autonomy leads to a smaller supply of PRH, which shows that fiscally more autonomous cities are not motivated to provide more PRH regardless of the demand.

Second, there is a mismatch in the quality of PRH, as about 20% of cities have low allocation rates and long waiting times simultaneously. This lack of effective supply is related to the “low quality” of PRH such as remote locations and inappropriate dwelling types. This is partly because local governments tend to provide land for PRH in more remote areas with poor infrastructure and such PRH is less attractive to residents. In addition, local governments have not designed proper housing units according to the actual demand.

Third, local governments rarely adjust eligibility criteria based on actual supply and demand, nor local economic conditions. Moreover, local governments usually have different eligibility criteria for locals and migrants, with the former being almost independent of PRH stock and allocation, and the latter being more restrictive in cities with a smaller PRH stock. In addition, cities with a large number of migrants have adopted stricter eligibility criteria for migrants, defeating the purpose of PRH to improve housing conditions of new urban residents.
This study has important policy implications. First, local governments should adjust eligibility criteria promptly by considering the demand and supply matching and allocation of PRH. For cities with a significant number of vacant PRH units, local governments can convert some of the units into other types of affordable housing or lower eligibility criteria. Second, as more than 37% of cities have an undersupply of in-kind PRH, currently the small monetary subsidy program should be expanded significantly. This would not only provide households with more choices but also mitigate mismatches in both the quantity and quality of PRH by introducing the market into the process. Lastly, the central government should pay more attention to the quality of the supply rather than the mere quantity.

Citations


Key Words: social housing, affordable housing, China, supply and demand, public rental housing

HOW DOES LAND BANKING PROGRAM INFLUENCE ADJACENT PROPERTY VALUE?: A CASE OF DETROIT, MICHIGAN IN US

Abstract ID: 371
Individual Paper

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The number of vacant properties (VP) surged by 24%, from 13.7 million in 2000 to 17.0 million in 2018 in the US (US Census Breau, 2019), and the VP issues became worse in cities of all sizes (Hollingsworth & Goebel, 2017). The under-managed VP has jeopardized a sense of community, neighborhood safety, and housing value (Díaz et al., 2011; Heim LaFrombois et al., 2019). The increased VP imposed the burden on local governments for additional actions for policing, keeping lots, and cleaning the waste from VP (AlHajal, 2013; Park & LaFrombois, 2019). As one of the management approaches to treat excessive VP, several cities have been emphasizing the role of a land bank (Center for Community Progress, 2022). Land banking helps transfer ownerships on back taxes and clear the tile so municipalities can expect more tax revenue because VP can be in the tax rolls again when sold immediately. The accelerated reuse of VP is expected to stand against the urban decline and aid in revitalizing the neighborhoods (Newman et al., 2018).

Despite the premise of land banking, studies have yet to explore the direct impact of land banking programs on communities over time. Most previous studies focused on VP’s negative spillover or ripple effects on neighborhoods. Some studies looked at the impact of land banking but were limited to exploring for a specific point in time observation. As the number of land banking programs increases, the outcomes of current land banking programs are adequately new enough that little is known so far. Given these facts, this study attempts to explore the impact of land banking and the adjacent housing property that reflects the level of neighborhood satisfaction and observes 1) whether the intervention of land banking influences the adjacent housing property
overtime; 2) which types of neighborhoods regarding socio-economic status are impacted the most; and 3) which land banking programs work better to increase/decrease the housing value.

The study area is Detroit, Michigan, one of the most notorious declining cities in the U.S. due to its economic meltdown, population loss, unemployment, and VP. Although the vacancy rate in Detroit has been stagnant since 2010, the vacant residential addresses of the city were still 21% of the total residential properties as of September 2019 (Drawing Detroit, 2019). To manage VP, Detroit Land Bank Authority (DLBA) was established in 2010. The various DLBA programs have been playing active until now, including ‘Own it Now’ (where homes are sold as-is), ‘Auction’ for $1,000 (where homes are sold with clear title), ‘Rehabbed & Ready’ (where homes are rehabbed with mortgage finance assistance), ‘Partner Sales’ (where properties are sold for community purposes), and ‘Side Lots’ for $100 (where home are less than 7,500 square feet and sold only to adjacent occupied homes) (Detroit Land Bank Authority, 2023).

To measure the intervention influences of DLBA programs around the residents (=500 feet), the data of property sales in Detroit and the sold properties through DLBA programs from 2011 to 2020 were used, and the Adjusted Interrupted Time Series – Differences in Differences (AITS-DID) modeling approach was applied. The AITS-DID approach allows for estimating the implicit price for neighborhoods where the programs are impacted without any other effects (Woo & Lee, 2016); then, the result of the study can represent the exact impact of sold properties through land banking. The result of this study is expected to support the basis for expanding the particular land banking programs that can effectively promote neighborhood satisfaction. The outcomes can also provide guidelines that fit low-, medium-, and high-income neighborhoods if the effective programs vary by neighborhood socio-economic conditions.

Citations


Key Words: Neighborhood, Vacant Property, Land Banking Program, Urban Planning

ASSESSING THE NONLINEARITY AND DISPARITIES IN IMPACTS OF ACCESSIBILITY FACTORS ON RESIDENTIAL PROPERTY VALUES DURING THE PANDEMIC THROUGH BAYESIAN MODELING: THE CASE OF THE AUSTIN, TEXAS, 2018-2021
Abstract ID: 400
Individual Paper

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The COVID-19 pandemic has significantly affected housing affordability, and it is worth noting that these increases are more significant in the areas that used to be considered moderate-dense. Austin, Texas, can be an example of a moderate-dense case experiencing a housing affordability crisis during the pandemic. Except for the traditional causes, such as large housing demand but low housing supply, the rapid economic growth and popularity as a destination for tech companies have contributed to the problem. Regarding this crisis, the City of Austin has taken several steps to address the housing affordability issue, and the city has implemented new policies to incentivize developers to build more affordable units. Despite these efforts, the housing affordability crisis in Austin continues to be a pressing issue. More projects and research are need to be done to present a precise investigation of the drivers of housing values, which can support implementing affordable housing and anti-displacement initiatives for policymakers.

In terms of these, this study aims to explore the impacts of accessibility on residential property values during the pandemic. There are two research questions in this study: What are the temporal impacts of accessibility factors on residential property values? What are the disparities in these impacts across different types of residential properties? To answer both research questions, we applied the Bayesian modeling methods considering the nonlinearity in the temporal impacts of accessibility on each type of residential property value. In detail, in the global model, we examined the nonlinear spatial impacts of accessibility factors on residential property values in general. Then, we adopted separate models to further test disparities in these impacts across six types of residential properties (single family, duplex, townhouse, apartment, condominium, quadruplex/triplex).

The final data selection is worth noting. We captured the residential property transaction records from the Multiple Listing Service (MLS) databases from May 2018 to May 2021. The dependent variable is the log-transformed housing sales prices divided by the total livable area. Also, the independent variables are the accessibility factors based on the open street map and Austin open GIS portal, including distances to the closest bus stop/hub and light rail transit station, distances to the closest green space and park, distances to the closest school, university, and public library, distance to the closest police station, fire station, civic center, and distance to the closest clinic, hospital, emergency room. In addition, the control variables include related housing status and neighborhood factors.

In the results, the global model highlights the importance of distances to the closest public transit facility and distances to the closest recreational area in predicting residential property values. In addition, the results indicate that the impacts of public transit accessibility turned to small at the beginning of the pandemic. Green space accessibility factors are significant and positive in the global model, and their impacts are enlarged at the beginning of the pandemic. Moreover, the results present significant disparities in the impacts of accessibility factors across property types. For instance, the impacts of public transit accessibility are more significant in high-density properties (apartment, condominium, quadruplex/triplex), while recreational area accessibility factors play a more significant role in affecting low-density properties.

Based on these results, there are three implications for academia and practice. First, the modeling results highlight the nonlinearity in the impacts of accessibility factors and the differences in these factors before, at the beginning of, and at the post-stage of the pandemic. Second, policymakers should be aware of public transit accessibility, recreational area accessibility, and clinic accessibility. Third, Bayesian approaches performed well in nonlinear modeling, which can be utilized in future analysis.

Citations

Prior recent research has shown that manufactured housing units are often concentrated in high-risk areas where they are exposed to severe environmental inequalities, including the risk of flooding and fire (Pierce, Gabbe, and Gonzales 2018, Pierce, Gabbe, and Rosser 2022). Often this exclusion is driven by the regulatory treatment of manufactured housing (Sullivan, Makarewicz, and Rumbach 2021). However, existing analyses of environmental risks among manufactured housing residents are limited to examinations of single states or metropolitan areas. To date, there have been no national analyses of environmental inequality among manufactured home residents.

In this paper, we use a national database of building footprints and machine learning (Support Vector Machines) to predict the location of 500 single-wide manufactured homes and 500 other buildings in each of the nation’s 3,000 counties. In total, we examine exposure among more than 2.8 million buildings nationwide. We then use high-resolution data documenting a wide variety of (dis)amenities in both the built and natural environment – including annual flood risk; coastal flood hazard; proximity to landfills, brownfields, and Superfund sites; proximity to food retailers, schools, water, and greenspace; and access to employment opportunities –to measure exposure and access to environmental risks and benefits among manufactured housing. In doing so, we examine differential risks experienced by manufactured housing units at different scales and for units located in manufactured home communities and on other sites. We then use factor analysis to develop the Manufactured Home Environmental Exposure Index (MHEEI) and to examine variation in the index across the country. Using regression analysis, we then examine whether the degree of environmental inequality experienced by manufactured housing is driven by the segregation of manufactured housing units from other buildings and the impact of land use regulations that restrict the placement of manufactured housing. Our analysis provides the most comprehensive examination of the extent and drivers of environmental exposure among manufactured housing to date.

Funding: This study was funded by the National Science Foundation (Award # 2048562)

Citations


Key Words: Housing, Environment, Hazards

YOUTUBE AS A SOCIAL LISTENING TOOL: MINING PUBLIC RESPONSE TO GOVERNMENT'S HOUSING POLICY ANNOUNCEMENT

Abstract ID: 444
Individual Paper

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Background: Social listening plays an important role in identifying policy needs and demands in the modern planning process (Dreier, 2016). Indeed, there has been considerable recent attention in the academy regarding the potential applications and pitfalls of big data from social media in efforts to understand better the social world (Hollander et al., 2016). Meanwhile, as YouTube has exploded in recent years, attempts to utilize YouTube as a social listening tool appear across extensive academic fields. Here, this study suggests one potential use of YouTube for mining public response to the government’s housing policy announcement. It includes an investigation of media portrayal of the housing policies and responses from its viewers. Since the public response to a policy is an important barometer for determining the success or failure of the policy, how media compounds housing discourses and further how it promotes public opinion are worth investigating.

Method: We searched housing-related video content with relevant searching keywords and collected meta-information on the contents through YouTube Developer API. The search period is from 2007 to 2021. Filtering the videos irrelevant to housing issues, the meta-information on the remaining 14,505 videos was gathered. The analytic strategy for the dataset is as follows: First, we intend to conceptually categorize the media types of each YouTube channel. For example, it can be categorized into personal and mass media channels (e.g., press) or labeled by their political stance, such as right-wing channels. Next, we investigate the media portrayal of the government’s housing policy announcement on YouTube by its media type. We examine, for instance, whether the video revealed a supportive or skeptical response to the government’s housing policy depending on the channel’s political stance. Lastly, we further hypothesize that the public response to the housing policy might be affected by the way of framing housing news. To accomplish the analysis, we benefited from several text mining techniques.

Result: Our preliminary finding reveals that not only the existing mass media (e.g., press) channels but also the personal media channels play a vital role in delivering housing news on YouTube. The subjects of housing information they delivered were also different by media type. For example, while the personal media channels mainly provided videos related to housing investment or sales, the market trend or housing policy was the primary interest. We also found an evidence for the differences in public response by channel type. That is, the negative sentiments were more visible in the housing news videos delivered by mass media channels than personal media channels. We plan to examine the media coverage and public response to it in more depth, focusing on videos related government’s policy announcement.

Implication: The role of media in housing studies has been widely discussed over the past decades. With the media environment change, growing media exposure and distinctive way of media consumption call for more nuanced and systematic understanding of the role of media in housing studies. In this context, YouTube can be a testing ground for investigating the suspicious role of media in shaping public discourses on housing policy.

Citations
CAN PROPERTY TAXATION FIX CHINA’S HOUSING MARKET? A REGRESSION DISCONTINUITY ANALYSIS

Abstract ID: 464
Individual Paper

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Soaring housing prices over the past 20 years in China have resulted in reduced housing affordability, construction fever in home building, increased vacancy rates due to low holding costs, and prevailing speculative investments. Among the various solutions is an annual property tax. Taxation on residential properties is often viewed as essential and urgent in China’s context for several reasons. First, as a benefit tax, it can serve as a stable local public revenue source, helping local governments restructure their weak revenue streams with an annual tax reflecting prevailing market values of land and properties—thus strengthening fiscal stability and sustainability (Cho & Choi, 2014; Zhu & Dale-Johnson, 2020). Second, as a wealth tax having significant distributional effects, the tax can help reduce income and wealth inequality among households and regions (Du & Zhang, 2015; Fan & Liu, 2015). Finally, the property tax can be used as a “spicy” measure against overly heated property markets by raising the cost of property ownership and discouraging speculative market demand.

Although introducing a property tax has been discussed since the 1990s, the actual implementation has taken a rather long journey. As early as 2003, the State Council released a notice of “a unified collection of real estate tax when conditions are met.” However, this proposal was repeatedly revisited over the years by the central government and news outlets without any visible outcome. Finally in 2011, the first pilot city-specific property tax program was launched in Chongqing and Shanghai. Yet further development of this practice has been delayed and the program was never rolled out in any other Chinese cities.

A common explanation for the pause of nationwide adoption is concerns about the market repercussions a new property tax may bring. Given the importance of the real estate sector in China’s economy and the heavy reliance of China’s local public finance on urban land sales (Chen & Wu, 2022), the tax-introduced economic shock may increase the risk of collapse of the real estate-driven local economy. Nevertheless, municipalities are poised at some point to levy an annual tax based on property values. Therefore, the Chongqing and Shanghai pilot property tax schemes have importance as testbeds for other cities, and evaluating their market impacts seems imperative in breaking out of the current standstill.

In this paper, we examine to what extent property taxes in Chongqing are capitalized into home values. Our main research questions include: Has the property tax in Chongqing contributed to the growth or decline of house prices? If so, by how much? How have developers and homebuyers responded to the tax in terms of changes in decision behaviors? Can the tax achieve a redistributive effect across different household income groups?

This study is distinguished from existing studies in four respects. First, we evaluate the causal effect of the pilot property taxation policy on the local housing market. While previous studies rely on city-level price indices or aggregated average home prices, our analysis of tax capitalization is based on over 100,000 individual housing
transaction records spanning a seven-year period. Second, we draw robust estimates for a property-tax-driven market impact by applying a fuzzy regression discontinuity framework. Chongqing’s property tax scheme offers an ideal quasi-experimental pretest-posttest design setting where fuzzy cutoffs are applicable to assigning treatment and control groups for causal inference. Third, given Chongqing’s policy design, we examine whether the tax exemption condition based on floor area size causes behavior distortions of the supply-side construction companies and the demand-side homebuyers. Finally, focusing on equity issues, we explore the tax’s redistributive outcome from wealthy households that own luxury housing to low-income households that rely on public housing.

Citations


Key Words: Property tax, Housing price, Regression discontinuity, Policy impact evaluation, Chongqing

SPATIAL SPILLOVER EFFECT OF LOCAL GOVERNMENT CHARACTERISTICS IN VACANT HOUSING CHANGE IN KOREA

Abstract ID: 471

Individual Paper

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A number of cities in many countries are undergoing shrinking in city size and experiencing associated problems such as aging infrastructure, deterioration of the residential environment, and an increase in abandoned housing. Korea is not an exception from the problems and cities in the non-capital region are currently facing the growth of abandoned housing. Recently, abandoned houses are also increasing in the metropolitan area. Growth in share of vacant housing causes deterioration of the residential environment as well as physical facilities inside the house. In addition, vacant houses expand to problem such as decreasing in value of housing, increasing management cost and resource burden, and increasing crime rate (Accordino and Johnson, 2000; Han, 2014). This problem extends not only to individual housing, but also to local problems.

The broken window theory (Kelling and Wilson, 1982) suggests the existence of spatial dependence in the growth of abandoned housing. Indeed, studies empirically find spatial dependence an increase in the growth of abandoned housing both at the individual housing and the city level (Jung and Jun, 2019). It can understand that there is spillover effect on the determinants of vacant housing growth among the adjacent regions. Spillover effect means that the change in same phenomenon in the adjacent city. Finding a solution for problem in limited boundaries, study may not fully consider the spatial dynamics in social phenomenon. In particular, the characteristics of local government can affect adjacent regions through policy diffusion.

In this context, ignoring spatial interaction among adjacent city can result in biased estimates that lead to wrong implication such as increasing unnecessary social cost. While there are studies examining spatial pattern of vacant
housing (Jung and Jun, 2019; Mockel, 2014), those studies did not analyze about spillover effect. In this regard, this study asks the following research question: Do determinants of vacant housing growth have spillover effect?

To examine the research question, we use the 2010 and 2020 Population and Housing Census of Korea as the principal data. We analyze the growth in the share of vacant housing units to the total housing units at the city level in 2010-2020, which is the dependent variable. The independent variables include housing, socio-economic, land use, demographic, and local government characteristics at the city level. We employ Spatial Durbin Model (SDM), a spatial econometric model to analyze spillover effect of the determinants of vacant housing growth.

The empirical results show that there is considerable spillover effect in growth in vacant housing. In particular, the characteristics of local government have a significant spatial spillover effect on the vacant housing change. This study suggests policy implications on the factors that geographically adjacent local governments need to cooperate with and that need to be focused differentially each region to prevent the increase of vacant houses. These implications can help to manage shrinking city function and revitalize city by suggesting method for handling vacant housing effectively.

The audience of this study will learn spatial interaction of change in vacant housing and determinants affecting growth in vacant housing with spillover effect. In addition, the audience will learn the strategies to manage vacant housing and prevention of decline in the city.

Citations


Key Words: Abandoned housing, Vacant housing, Spillover effect, Spatial analysis, local government characteristic
the COVID-19 pandemic in South Korea by applying the research questions: (a) "How can machine learning be used to improve accuracy in predicting housing precariousness?", (b) "What characteristics are more important to predict housing precariousness?", (c) "What are the differences in predictive modeling between before and after the COVID-19 pandemic?"

Data and Methods: This study applies machine learning techniques, specifically, ensemble-based approaches (Kittler et al., 1998), which are known for their excellent predictive power achieved through combining multiple weak classifiers. We use the Korea Housing Survey data conducted annually by the Ministry of Land, Infrastructure and Transport of South Korea containing rich information on housing precariousness for statistical learning.

Findings: Our preliminary analysis shows the following findings: First, we confirmed that many tenants in South Korea are experiencing extensive housing precariousness. The number of people experiencing housing precariousness after COVID-19 increased and manifested in somewhat different forms. Second, we identified which socio-economic characteristics affect the experience of housing precariousness by using ensemble-based machine learning. Finally, as a result of developing a predictive model of housing precariousness using a classification algorithm, we found that the random forest model demonstrated the best performance in terms of prediction accuracy.

Implications: This study contributes to the literature by providing insights into the development of a machine learning-based predictive model for housing precariousness, with implications for policymakers and researchers seeking to address this critical issue. The prediction model provides the size and geographic distribution of individuals who are likely to experience housing precariousness, enabling the development of preemptive measures for housing welfare.

Citations


Key Words: Housing Precariousness, Predictive Modeling, COVID-19 Pandemic, Machine Learning

WHOSEHAUS?! HOUSING FOR WHOM, WHEN AND WHERE: UNDERSTANDING THE HOUSING NEEDS OF TORONTO'S AGING GROUPS

Abstract ID: 522

Individual Paper

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By 2026 almost a quarter of the Canadian population will be over 65 years, which raises concerns about the future need for housing, services, and amenities in our cities. Currently, there are more seniors in Toronto than people under 15, a trend that dramatically happened between 2011 and 2016. This number is projected to rise steadily in the next ten years and almost doubling by 2046.[1]

Different map projections and demographic studies of Toronto show that areas zoned as predominantly single-family homes will be inhabited mainly by people 65 years and older in less than six years. [2] Unless there is a mass migration towards retirement communities and long-term care homes, we will need to radically rethink the physical form and composition of these neighbourhoods to accommodate aging-in-place. Another group of people affected by the lack of age-inclusive housing are those who identify as 2SLGBTQI+[3]. So far, there are no comprehensive housing studies, but just limited information that "out" seniors would feel the need to go back "into the closet again" because of the lack of appropriate housing facilities and fear of discrimination, homophobia or transphobia.

This rethinking requires new forms of housing and services such as healthcare, lifestyle preferences, socialization opportunities, and transportation systems. This means that in the near future, we will need retrofitting mechanisms that align with concepts of aging-in-place and aging-in-communities. Aging-in-place is when a person consciously decides to stay in the inhabitation of their choice for as long as they can. Aging-in-community means that a person can rotate from different facilities and housing types depending on their needs by preferably staying in their neighbourhood.[4]

This paper’s overall goal is to understand the needs of Toronto's aging demographics and provide affordable, equitable and novel housing and city planning guidelines to municipal and development partners. It focuses on four neighbourhoods in Toronto with the highest proportions of older adults.[5] This study adds to the broad literature on aging-in-community because it examines macro and micro-level push/pull factors using a diverse combination of economic, spatial and novel design-based methods. It also investigates the spatial manifestation of age-inclusivity in Toronto while expanding the definition to encompass 2SLGBTQI+ senior groups.

This paper explores three macro-level factors that influence the ability to age-in-community as one's needs for care and support change: (1) appropriate housing availability, (2) transportation and mobility accessibility, and (3) land use and zoning policies that dictate built forms and proximity to equitable amenities. Finally, we end by proposing micro-level changes with a study of architectural and urban design scale retrofits that can meaningfully impact an older adult’s ability to age-in-place and in-community.

Citations

PROTECTED FROM EVICTION? A STUDY OF SUBSIDIZED HOUSING EVICTIONS IN OREGON

Abstract ID: 543

Individual Paper

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Is subsidized housing protective against eviction for tenants? Existing literature has yielded mixed results (Gromis et al., 2022; OPB, 2021; Preston and Reina, 2021). While Preston and Reina (2021) find that eviction filing rates are lower in subsidized multifamily housing than in unsubsidized housing in Philadelphia, Gromis et al. (2022) show that public housing has a higher eviction rate than the nation’s average. More comprehensive studies on evictions in subsidized/regulated housing are needed to better understand the phenomenon. Using a unique data set compiled from the Oregon Association of Home Inspectors (OAHI), Oregon Metro, Oregon Law Center (OLC), Oregon Judicial Department (OJD), and US Census Bureau, this study examines whether subsidized/regulated housing offers protections for tenants against evictions in the state of Oregon. The study fills the gap in the literature by (1) comparing evictions in subsidized housing with those in unsubsidized housing, and (2) investigating how the impact of the state eviction moratorium differs between them. Descriptive analysis and OLS regression are used to address the research question. The results show that: (1) about 6% of eviction cases filed are from subsidized/regulated housing between January 2019 and March 2023; (2) nearly half of the subsidized eviction cases cited nonpayment as the reason to file for eviction; (3) compared with unsubsidized housing, eviction cases from subsidized housing are less likely to be dismissed and more likely to receive a default judgment; (4) during the moratorium, eviction cases from unsubsidized housing declined more than the ones from subsidized housing. The findings suggest that subsidized housing may not be as supportive as we thought. Complementing strategies are needed to strengthen tenant protections against evictions in subsidized housing.

Citations


Key Words: eviction, subsidized housing, eviction moratorium, Oregon

ARE CORPORATE OWNED SINGLE-FAMILY RENTALS (SFRS) DISPROPORTIONATELY AFFECTING AFRICAN-AMERICANS? A CASE STUDY OF NASHVILLE, TN
Traditionally, racism in the housing industry focuses on unfair lending practices, institutional racism, and gentrification. However, new forms of disparate impact can be potentially detected in access to home ownership opportunities amid the rise of Real Estate Investment Trust Single Family Rentals (REIT SFRs). Corporate investors, since the housing crisis of 2009-2010, bought large portfolios of single-family residential homes and converted them to single-family rental houses. To grow market share, institutional investors have partnered with national builders to develop build-to-rent neighborhoods across cities in the South and Southeast that are entirely owned by REITs. Critics contend institutional investors are crowding out working class and middle-income families from ownership opportunities. Home ownership is the predominant means of wealth gain for an average American. If REIT SFRs limit home ownership opportunities, they represent a transfer of wealth from middle- and working-class populations to absentee investors. The phenomenon will affect all, but the impact will be more severe for African Americans because of persistent wealth and homeownership gaps. African Americans register ten times less net worth compared to a White American (McIntosh, Moss, Nunn, & Shambaugh, 2020). There is a paucity of research on REIT SFRs in urban America. Limited studies on REIT SFRs have raised concerns over high fees, poor maintenance of properties, and lack of regulations (Woodman et al., 2021; Ferrer, 2021; Homes, Ten, & Rowland, 2021; Justia US Law, 2019). Ihlanfeldt & Yang (2021) shows SFR’s can reduce segregation in white suburbs, but the analysis ignores ownership and wealth creation aspects, focusing on the African Americans. The associations between REIT SFRs and African American population changes is important to study because it has strong implications on home ownership among African Americans, their wealth gain, and racial wealth gap.

This study evaluates the spatial distribution of SFRs in a metropolitan region, evaluates demographic compositions of the SFR communities, and investigates the implications of such housing choices on African Americans. Four questions are addressed in this research. 1) What is the spatial distribution of the SFRs in the study area? 2) Where are they concentrated. 3) What is the demographic composition of the communities where these properties are clustering? 4) Are those areas disproportionally affecting any racial group, such as African Americans?

The research focusses on counties in the Nashville region for two reasons: First, the region has experienced a high growth of REIT SFRs in the last decade; and two, the region has a high presence of African Americans. Using data from county property appraisers’ offices, US Census, and American Community Survey, we first identify the neighborhoods experiencing high REIT SFR density and assess their overlap with those that experienced high African American population growth. We then conduct a series of regression analyses to determine the associations of high REIT SFR density and African American growth after controlling for socioeconomic variables. We also evaluate the differences in housing tenure between Whites and African Americans between the high and low REIT SFR density areas.

The study points towards positive associations between high concentrations of institutional investors and African American population change. African American population growth throughout the Nashville region correlates with high density institutional investor ownership. Data also points towards higher rentership of the African Americans in the high REIT SFR density areas compared to lower concentration communities. We conclude that African Americans are renting properties from corporate investors because of the access to better quality of life in those suburban neighbourhoods. However, growth in African American rentership will confound attempts to shrink homeownership disparities and wealth gaps. Our research does not point towards these REITs disproportionately targeting the African Americans; rather institutional investors are increasing their market share in desirable communities that are expensive, but often times more “affordable” than owning (in the short-term).

Citations


Key Words: REIT SFR, Housing, African Americans, Wealth Gap, Nashville

IDENTIFYING EARLY SIGNS OF HOUSING DECAY TO PREVENT FUTURE DEMOLITION ORDERS USING STREET VIEW IMAGERY: EVIDENCE FROM SAN ANTONIO, TX

Abstract ID: 569
Individual Paper

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The pressure for urban development has increased considerably with the recently experienced rapid urban growth in more affordable Sunbelt cities in the U.S. Demolishing houses in decay is a common result from such pressures as they are 'low hanging fruit' for urban renewal, especially in high interest areas (e.g. near city centers). Although replacing decayed structures with higher density alternatives near amenities is a desirable objective from an environmental and affordability standpoint, preserving the cultural and historical character of neighborhoods while minimizing the effects of gentrification and displacement must also be a precondition for development. This paper uses the case of San Antonio (TX) as it has been highlighted as both a fast growing mid-size and a high-demolition city. We build on the city sensing literature by training and estimating a model that combines deep learning on Street View images (STV) with machine learning to predict the likelihood of houses receiving a demolition order. Our results indicate that our deep learning and machine learning models have high accuracy. In particular, the random forest version of the ML model accuracy rate is over 91\%. When using these models to predict future demolition orders, our results are consistent to the reference used (city, historic preservation evaluator, real-estate evaluator). This result is important as it highlights that different code enforcement staff are likely to provide different results in terms of demolition potential.

Citations


CONDOMINIUM HOUSING WON'T LAST FOREVER: CHALLENGES FOR FUTURE URBAN REGENERATION

Abstract ID: 579
Individual Paper

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In many countries around the globe - unlike the USA (and Canada), condominium (or closely related types) is a major form of housing tenure – usually in multi-unit multiple-floor buildings. And unlike in the USA, where “condo” is still shorthand for luxury apartments, especially in towers, globally, most condominium apartments are owned by middle- and low-middle income sectors of society. In recent years, in the USA too, the share of condominium housing has been rising also non-luxury units due to densification policies and conversion of private-rental housing in lucrative locations.

Like any other type of housing, condominium apartments won’t last forever. They will need to undergo deep regeneration through major repair or transformation, demolition and reconstruction, or demolition without reconstruction. Unlike the huge body of research about urban renewal or neighborhood regeneration where single-owner housing (private or public) is involved, the special context of condominium tenure is largely ignored. Among European countries, where there is a large stock of old condominiums, the lack of scholarly interest reflects the meagre experience in practice. partly due to shrinkage of cities. In the USA, the urgency of large-scale regeneration has not yet arrived because the condominiums housing stock is, on the average, relatively recent. However, it will not stay young forever.

Regeneration through government coercion (such as eminent domain) is a declining practice globally. Housing regeneration often relies on the real-estate market coupled with planning and zoning policies. In theory, where real estate economics permit, this could apply to condominium housing as well. However, inherently, condominium tenure renders voluntary decision making more difficult than single ownership. There are scores, hundreds, or even thousands of owners. And there is the additional “troublemaker” - the common parts of the building, ground, facilities, and sometimes also investments.

The major obstacle is collective action by the owners. In most European countries, condominium legislation still requires owners’ unanimous agreement for the situations discussed. In practice, the chances of obtaining everyone’s consent are low. As a start, the law should permit decision by a special majority short of unanimity. What is the international picture?

There is no global data about condominium legislation, but we have assembled some information: In the USA approximately half the number of states do allow for special majorities – mostly 90 percent. In most states, application in practice may be low. Beyond the USA: In British Columbia - 80 percent; New South Wales Australia - 75 percent; Hong Kong - 80 percent; Singapore – usually 80 percent; Israel and Turkey require only 67 percent.

There is very little reported research about experience with special majorities. The paper reports on comparative analysis of three jurisdictions (BC, Israel and Turkey) where there is enough de facto practice to be able to gain preliminary understanding of the issues involved. Through legal analysis (including court decisions) in each of the countries, we attempt to answer key issues such as: What are the procedures whereby the minority can raise its objections? What are the real estate valuation rules for calculating the ‘monetary or new or replacement-housing rights? What are the rights of the minority who object to regeneration? What is the distribution of grounds for objecting and how successful are they? What legal grounds are more likely to be accepted as reasons for holding out? How are conflicts resolved or adjudicated? In this pioneering study, we also seek to learn about the perceptions of the various stakeholders of the distributive-justice implications. For this part of the study, we apply in-person interviews with major institutional stakeholders. Evaluation of outputs and outcomes would have to
await the attention of many more researchers from several disciplinary perspective.

Citations


Key Words: condominium tenure, housing regeneration, condominium towers, real estate values, densification

ESTIMATING IMPACTS OF CLIMATE CHANGE RISK PERCEPTION ON LOCAL HOUSING MARKET: A CASE STUDY IN MIAMI-DADE, FLORIDA

Abstract ID: 588
Individual Paper

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Climate gentrification is a phenomenon in which climate impacts and adaptations trigger the displacement of marginalized populations due to inflated property values (Best & Jouzi, 2022). Climate gentrification has recently received considerable attention in the media and among scholars because it potentially impacts the urban environment (Keenan, Hill, & Gumber, 2018). The prevailing concern of future climate change could disrupt the existing property valuations in coastal communities and their surroundings. Therefore, the possibility of climate gentrification in coastal communities should be thoroughly investigated (Best & Jouzi, 2022).

Many previous studies have tended to empirically verify one previously suggested climate gentrification pathway, the ‘Superior Investment Pathway’ (Baldauf, Garlappi, & Yannelis, 2020; Bernstein, Gustafson, & Lewis, 2019; Keenan et al., 2018; McAlpine & Porter, 2018). Superior geography is hypothesized to be high-elevation areas that are less vulnerable to flooding because of a lower level of exposure to climate risk (Keenan et al., 2018), and the main factor of this pathway is a concern for the property in future risk areas. While many previous studies have tried to verify how people’s concerns make investments move to higher elevation areas, one critical factor is usually overlooked in this mechanism, proximity to the coastline. Proximity to the coastline is one of the significant factors in residential asset valuations because of coastal amenities such as water view and accessibility. Therefore, it is imperative to consider this preference factor together with the impacts of climate change risk perception to explore how attractiveness plays out in the residential market dynamics in the context of climate change.

The main goal of this study is to examine the effect of climate change on local residential property prices in Miami-Dade County, considering the closeness to the coastline that may simultaneously have two conflicting effects: concern for climate change risk and preference for coastal areas. Specifically, this study investigates the proximity to the coastline as a factor of residential preference and the elevation as a proxy for risk perception to gain an insight into climate change’s impact on the residential market.

In this research, the hedonic pricing model is applied to Miami-Dade Parcel Sales, provided by the county’s
property appraiser office. The countywide parcel-level sale database consists of 754,129 single-family residential sale records between 1980 and 2020 and contains information about parcel geometry, sale records, zip code, flood zones, building ages, number of bedrooms, elevation, and distance to the coastline.

We test four hypotheses regarding how elevation, distance to the coastline, and their interaction affected residential property valuation over the last 41 years. The findings suggest that the preference for higher elevation properties has increased over time in light of accelerated SLR. Homebuyers significantly consider higher elevations in coastal areas. However, despite climate change risk, preference for areas closer to the coast still exists. There have been notable changes in the above results since 2000 due to exacerbated flooding events compared to the earlier period.

Citations


Key Words: Housing markets, Climate gentrification, Sea level rise, Hedonic pricing model, Miami-Dade County

EVICITION, SPATIAL INEQUALITY, AND FINANCIALIZATION IN TORONTO

Abstract ID: 596
Individual Paper

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Financialization is driving intensified socio-spatial inequality in cities around the world. The financialization of multi-family rental housing is contributing to these trends, as financial firms (private equity groups, institutions, publicly-listed firms, real estate investment trusts [REITs], and asset managers) increasingly consolidate ownership of apartments. In Canada, financial firms have amassed an estimated 30 percent of rental housing stock, with levels in some cities and neighbourhoods much higher. Researchers have argued that financialization is intensifying crises of affordability and security of tenure, as financial firms are structurally motivated to pursue investor returns in ways that are more aggressive than other types of landlords. While advocates and researchers expect that financialization is associated with an increase in evictions, only a few studies (in the US, focusing on single-family rentals) have demonstrated this link. This paper explores whether financial firms file higher rates of evictions in multi-family housing in Toronto, Canada, and spatially analyzes the connections between eviction and gentrification. Drawing on a unique database of all evictions filed in the 10-year pre-pandemic period of 2010-2019, applying to all Toronto rental housing properties (over 20 units), we find that financial firms file to evict at dramatically higher rates than chain owners, multi- and single-property owners, and non-profit and public firms. We also analyzed all building transactions during this time period, finding decisively that financial firms have a higher rate of filing after purchasing properties. This is most significant when buying from small-scale one-property owners, with a six-fold increase in filings going forward each year after purchase by a financial firm. Spatially, filings are concentrated in low-income communities (often in Toronto’s inner suburbs), indicating that lower-
income, racialized, and newcomer populations are most affected by the financialization-driven housing insecurity. For planners, these patterns show that ownership matters when it comes to rental housing stability.

Citations


Key Words: Financialization, Eviction, Rental Housing, Displacement, Gentrification

HOMEOWNERSHIP GAPS AMONG RACE GROUPS AND AGE COHORTS IN LOS ANGELES COUNTY, THE STATE OF CALIFORNIA AND THE UNITED STATES

Individual Paper

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The Hispanic population is the largest minority group in the United States. Although this population constitutes a large share of the total population in the U.S., their homeownership rate is very low in comparison. Differences in homeownership rates among ethnoracial groups constitute what is known as the "homeownership gap". This article introduces various methods of analysis of the Hispanic homeownership gap with a specific focus on gaps in homeownership as measured by race and age. This paper specifically investigates the logic of using homeownership gap indicators; explores different variations of the gap definitions; and investigates trends from 2010 to 2021 in the United States, California and Los Angeles County. Different methods are proposed for analyzing homeownership gaps, specifically focusing on different approaches of measuring homeownership gaps. Among these approaches, we propose measuring homeownership gaps life-cycle differences measured by comparison of homeownership status between different age groups within an ethnoracial group within a given time period; by a “generational” homeownership gap measured by differences between age groups; and by the homeownership gap between groups jointly defined by both race and age group. Findings confirm that the homeownership gap among different ethnoracial groups varies depending on the investigated level of geography. This confirms prior research work. Further, the results indicate that homeownership gaps in California and Los Angeles County are much lower than those in the U.S. Essentially, Hispanics are faring much better in California and Los Angeles County. However, this low homeownership gap may be attributed to the sharp decline in white homeownership in California and Los Angeles County. More intriguing is an overview of 2021 ACS IPUMS data from the Census Bureau. This data provides a detailed view of generational gaps that indicate widening differences between an older generation of homeowners and younger generations. The discrepancies are further exacerbated when differences are measured between jointly defined race and age groups. The younger generation of Hispanic and African Americans ages 35 to 44 are the most affected. In California and the U.S., the differences are of great concern. This is because the older generation is starting to transition and leave the housing market. The implications that can be derived from a continuation of this trend can greatly affect the housing market in the future. Consequently, housing policies should be put in place to assist younger generations in attaining homeownership.
Citations


Key Words: Hispanic Homeownership, Homeownership Gaps, Homeownership Advancement

A MULTIPLE CASE STUDY ON THE ROLES OF GOVERNANCE AND ORGANIZATIONS IN AFFORDABLE HOUSING OUTCOMES FOR LOW-INCOME HOUSEHOLDS
Abstract ID: 660
Individual Paper

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With the privatization of affordable housing programs for low-income households, the current U.S. system of affordable housing provision has been complicated and diversified. Multiple players participate in affordable housing provision, which includes governmental and nongovernment entities and traditional and nontraditional housing providers. In this context, the previous studies on affordable housing outcomes have shown either successful cases of affordable housing provision or differences in affordable housing provision in one housing program, Housing Opportunities for People Everywhere (HOPE VI). However, we know little of the differences in affordable housing outcomes for low-income households at the neighborhood level. This study examines the complexity of affordable housing outcomes for low-income residents at the neighborhood level.

Using a multiple-case study approach, I explore affordable housing provision in four selected neighborhoods (cases) in the city of Columbus, Ohio: (a) one with a nonprofit organization in a leading position of affordable housing provision, (b) one with a for-profit organization in a leading position, (c) one with a public organization in a leading position, and (d) one with a civic society in a leading position. The four cases are selected among neighborhoods in the city of Columbus because neighborhoods in Columbus are likely to have similar housing-related toolsets. This research draws on secondary data and semi-structured interviews of relevant organizations and residents of the four neighborhoods.

A synthesis of two theoretical frameworks—publicness theory and the governance constellation framework—addresses possible reasons for varied outcomes in affordable housing provision for low-income residents at the neighborhood level. Based on this synthesized framework, this research focuses on the roles of organizations, neighborhoods' historical contexts, and neighborhood governance in each neighborhood's affordable housing provision. Here, neighborhood governance indicates relationships between stakeholders in the decision-making process for affordable housing development.

This research seeks to develop a hypothesis about the dynamics of affordable housing at the neighborhood level. Semi-structured interviews with staff of relevant organizations and residents demonstrate the opportunistic nature of the current U.S. system of affordable housing provision and the critical roles of a dedicated leading organization and a leader in this organization in affordable housing provision. The study results will show the
variations of subsidized housing resources' distribution across neighborhoods and hypothesize about the mechanisms of such varied provision of affordable housing. In particular, this study will reveal which neighborhoods are more likely to be overlooked in this opportunistic and privatized process of affordable housing provision. I will conclude this study with policy implications to address these neglected neighborhoods and the way to enhance organizations' involvement in affordable housing provision in this privatized affordable housing system.

Citations


Key Words: Affordable Housing, Community Development, Anchoring Institution, Privatization, Poverty

DOES A GOOD HOME MAKE OLDER ADULTS BETTER OFF? AN EMPIRICAL ANALYSIS OF THE EFFECTS OF HOME ATTRIBUTES ON OLDER ADULTS’ WELLBEING

Abstract ID: 667
Individual Paper

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The world population is aging at an alarming speed, including in China. Creating an inclusive city that caters to the needs of all social groups, especially the disadvantaged (e.g., the elderly), has become the priority of city policymakers. Recent studies increasingly demonstrate that older adults’ well-being is not only determined by their own resources and physical conditions but also by various social determinants, such as the community environment and the quality of housing they live in. Influenced by traditional norms, most Chinese older adults prefer to age in place without long-distance relocation, and most of them live in their homes either alone or with families instead of in nursing homes as they age. Thereby, providing age-friendly housing that facilitates the elderly aging well in place is crucial to improve the inclusiveness of Chinese cities. Using matching strategy and regression analysis, this study investigates the impacts of various housing attributes on older adults’ subjective well-being and the moderating effect of living arrangement. We firstly comprehensively measure multi-dimensions of housing features of the respondents. Then, by matching comparable older adults with similar attributes, we identify the effects of various types of housing features on older adults’ subjective well-being. Furthermore, we examine whether older adults living alone are more susceptible to housing attributes than those living with family members. This study provides insights to real estate developers, property management companies, as well as the government to create age-inclusive housing and communities that better prepare cities and communities for an aging society and to improve older adults’ well-being in their later life.

Citations


Key Words: social determinants of health, older adults, well-being, housing, aging

311 CALLS AND NEIGHBORHOOD ATTRIBUTES -- A PANEL STUDY OF HOUSING PRICES

Abstract ID: 687
Individual Paper

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311 provides citizens a hotline service to report non-emergent issues such as sidewalk and road repairs, odors and noises, abandoned vehicles, graffiti and so on. Urban researchers have interpreted 311 service calls as a form of citizen-government interactions (Hartmann, Mainka, and Stock, 2017; Minkoff, 2016), a reflection of characteristics of urban neighborhoods (Wang et al., 2017), an indicator for physical disorder (Wheeler, 2018), and a measure of government accountability (Schwester, Carrizales, and Holzer, 2009; Zobel, Baghersad, and Zhang, 2017). Much existing research has explored the connections between the volume of 311 calls and neighborhood physical and social attributes. However, very few studies assess the usefulness of 311 call data in housing price studies.

This study uses Louisville, Kentucky, as a case study to investigate three research questions: (1) What are the most common types of complaints raised in 311 service calls over the past decade? (2) Do different types of neighborhoods exhibit different patterns of complaints in their service calls? (3) Is there a relationship between 311 service calls and housing resale values? We collected data from the Louisville Metro Government for 311 service calls from 2010 to 2019, as well as housing transaction data from the local Property Valuation Administrator office. Using this data, we calculated the annual block group-level volume of 311 service calls and the average housing transaction price for each block group. We also collected additional data from the American Community Survey databases to construct indicators for neighborhood social and demographic attributes. Descriptive and correlation analyses were conducted to explore the first two research questions, while a spatial panel data model was used to analyze the determinants of housing price changes and assess the significance of the number of 311 service calls in explaining housing prices.

This research uses Louisville, Kentucky, as a case study and explores three research questions: (1) what types of complaints have been raised in the past decade in these 311 service calls? (2) Do different types of neighborhoods tend to raise different complaints in these service calls? (3) Is there is relation between 311 service calls and housing prices? We collected 2010-2019 311 service call data from the Louisville Metro Government and the 2010-2019 housing transaction data from the local PVA office. The annual block group level 311 call volume and average housing transaction price is calculated for every block group. Additional data has been collected from the American Community Survey databases to construct indicators for neighborhood social and demographic attributes.
Descriptive and correlation analyses are conducted to explore the first two research questions. A spatial panel data model is constructed to analyze the determinants of housing price changes and to assess whether the number of 311 services calls acts as a significant explanatory variable in explaining housing prices.

Citations


Key Words: 311 Service Call, Neighborhood Attributes, Housing Price, Spatial Panel Data Analysis

SUPPLYING PUBLIC RENTAL HOUSING FOR YOUTH IN URBAN AREAS: REDEVELOPING OLD PUBLIC BUILDINGS

Abstract ID: 698

Individual Paper

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This study aims to analyze which areas in Seoul are suitable for a mixed-use development of old public buildings to provide youth public rental housing in the city center. Seoul, the most populous city in Korea, has an area of 605.2km², which is nearly 3.5 times larger than Washington D.C. Despite the dense network of public transportation, the average commute time in the city center is almost an hour and a half. The workers providing labor in the city center are typically young people. As their commuting time increases, various social problems such as recruiting difficulties, childcare and household burdens, and a decrease in marriage rates have emerged. To achieve a better work-life balance and promote the concept of n-minute cities, the Korean government has been experimenting with various ideas to provide public rental housing within the city center for young people who work there.

One of the ideas introduced in 2017 is the redevelopment of old public buildings into mixed-use public rental housing for young people. The public buildings, constructed intensively from the 1970s due to Seoul’s rapid expansion, were designed based on the population of residents and civil servants at the time, and after 50 years, these do not reflect the demand generated by the population growth and their needs anymore. Therefore, the ‘mixed-use public rental housing for young people’ project, which is constructing public buildings and youth housing together, has started. However, these projects are built only for the suppliers’ convenience, ignoring the young tenants’ preferences. This kind of supplying method may lead to a deficit in rental revenue in the future due to poor location conditions of the old public buildings(Kim et al., 2018). Therefore, this study analyzes the feasibility of this project based on the demand for youth housing and the potential for the redevelopment of old public buildings.

Prior research has proposed a business model that utilizes underused and unused public sites to improve land use efficiency and convenience in supplying public rental housing(Bong, et al., 2015; Chung et al., 2018; Park, et al., 2020). Through a review of previous studies, this study conducted an analysis in three major directions. Firstly, using the results of a housing survey, the factors influencing youth housing selection were identified. The scores for housing demand were given to each cell in Seoul divided into 100m x 100m grids. Secondly, outdated public
buildings that meet the conditions for redevelopment as youth public rental housing were selected. Thirdly, the two layers were merged to rank outdated public buildings with high housing demand scores. The analysis was limited to Seoul in 2019, excluding the influence of COVID-19, and the Arc GIS program was used.

The results of the analysis are as follows. Firstly, the factors influencing youth housing selection were proximity to the workplace and transportation, accessibility to convenient and cultural facilities, accessibility to parks and green areas, and educational environment. Secondly, 217 outdated public buildings were selected based on site area, age, and rental standard. Accordingly, a list of 30 complex development-type public rental housing sites for outdated public buildings with high housing demand scores was derived.

Recently, global cities such as San Francisco and Paris have faced similar problems to Seoul. Due to the high cost of housing in downtown areas, people have to commute for over three hours round trip, and alternatives such as ADUs are proposed. While there may be differences in each country’s culture regarding the use of public buildings or other shared spaces, the youth public rental housing site analysis methodology proposed in this paper can contribute to affordable housing policies within the city center.

Citations


Key Words: urban housing, public rental housing, public building redevelopment, housing demand, suitability modeling

COMMUNITY PLANNERS AS INTERMEDIARIES FOR INCLUSIVE URBAN DEVELOPMENT: A MULTI-SCALAR COMPARATIVE ANALYSIS OF COMMUNITY REGENERATION PRACTICES IN SHANGHAI

Abstract ID: 721

Individual Paper

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In recent years, China’s urban community development has seen significant innovation in grassroots governance, with a focus on the Sub-district system as a vital foundation for exploring devolution and integration agenda in community regeneration. From a spatial planning perspective, this institutional reform has the potential to allow for greater diversity in the resultant accommodations, as power is reworked in new forms of state spatiality (Haughton et al., 2009), particularly in terms of community planning logic, which is accompanied by the emergence of informal or soft spaces and fuzzy boundaries. This presents a dual challenge for community planners: how to act as a powerful agent for policy integration while also providing a participatory and deliberative spatial approach to preparing strategic plans.

Shanghai has been at the forefront of exploring the reform of the Sub-district System in community regeneration
In various districts across Shanghai, community planners are viewed as agents of the state, and integration of agendas between grassroots government and urban strategies is supported by appropriate spatial dimensions for networked multi-scale urban activities (Wu and Zhang, 2022).

This study examines the role of community planners in promoting inclusive community regeneration agendas with a multi-scaled perspective in Shanghai, China. The study utilizes a qualitative approach, analyzing three best community planning practices in different districts in Shanghai (Pudong, Changning, and Xuhui) through in-depth interviews with key stakeholders, policy document reviews, and planning report analysis.

The findings reveal that community planners’ effectiveness in promoting inclusive community regeneration agendas depends on their ability to provide “glue” to the new multiple spaces of governance, alongside other devices for policy integration. The intermediary role of community planners has a network effect that depends on several factors. Firstly, the institutional status of community planners is essential. Community planners who function as higher-level government agents are more effective in connecting multiple spatial strategies and establishing cooperative relationships with grassroots governments. Secondly, the professional background of community planners is also a crucial factor. Those with an urban planning background are more likely to embed themselves in various planning and non-planning networks composed of different stakeholders, achieving the policy objectives of community planning. Lastly, the complexity of the community, the distributed power, and the networked resources have a significant impact on the integration of the community regeneration agenda.

In summary, our research indicates that community planners have a significant impact on the spatial organization and policy objectives of inclusive urban development. These findings contribute to our understanding of how community planners can act as intermediaries to form a more networked approach to spatial planning at the community level with a multi-scaled perspective. The findings demonstrate the importance of spatial planning as a networked activity that involves a rethinking of bounded space and professional boundaries in place-making processes. The empirical research presented in this study enriches the discussion of multi-scalar analysis methodologies. By recognizing the intermediary function of community planners and their ability to bridge the gap between different spatial scales, policymakers can better leverage their expertise to develop more effective community regeneration strategies.

Citations


Key Words: Community planning, community planner, Inclusive urban development, Multi-scalar analysis, community regeneration

SPATIAL-SCALE PLASTICITY OF URBAN RESIDENTIAL AREAS: THE ENLIGHTENMENT OF SHANGHAI'S RESPONSE MODEL TO THE COVID-19

Abstract ID: 748
Individual Paper

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Shanghai’s measures to address the COVID-19 pandemic have attracted world-wide attention since March 2022. The response to public emergency and pandemics in built environment has prompted a profound reflection in residential planning. Herein, an under-developed site located in Shanghai’s Huangpu River waterfront is used as a case study. Based on a site survey, interviews, the phased lockdown policies of different urban areas, and published data on the spatial distribution of infection cases, this paper analyses the effectiveness of strategies for coping with different stages of epidemic spread at different spatial scales. In addition to ensuring the privacy of living quarters, our residential planning ensures the flow and social communication of people in different neighborhoods, achieving the resilience of local lockdown and flow. This study redefines the openness and reasonable scale of residential areas based on analysis of the advantages and disadvantages of gated and block residential areas facing pandemics. This paper analyses the feasibility of a residential site plan based on the above conception, which has spatial scale composable features for the basic residential building groups. This study points that design should be considered to achieve the flexibility of spatial scale through the different assembling pattern of basic-living-space-unit.

Citations


Key Words: Spatial scale plasticity, Convid-19, Residential building groups, Design for SDGs, Shanghai

THE IMPACT OF CLIMATE RISK DISCLOSURE ON HOUSING SEARCH AND BUYING DYNAMICS: EVIDENCE FROM A NATIONWIDE FIELD EXPERIMENT

Abstract ID: 758
Individual Paper

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Climate change poses new risks for every property in the United States. Given that information about place based property risks is costly or sometimes impossible to acquire, home buyers are unlikely to be fully informed about these risks. Using a large-scale nationwide natural field experiment launched by Redfin, we estimate the causal
effect of access to home specific flood risk information on home buyer search, bidding, and buying behavior. Redfin randomly assigned 17.5 million users to receive the flood risk for properties they searched. We find that: (1) the flood risk information affects every stage of the house buying process; (2) people trade-off property amenities, such as living near water, the size of the property, and the number of bedrooms for owning a lower flood risk property; and (3) the treatment effects are stronger for users searching in high flood risk areas, but do not differ for buyers in Red and Blue Counties. The nationwide aspect of the treatment allows us to test for general equilibrium effects of scaling up access to pinpoint risk information. We find that the information changed property prices and the market equilibrium.

Citations


Key Words: Climate Change, Housing, Adaptation, Extreme Weather Events, Information

CHANGES IN RESIDENTIAL PREFERENCES OF CHINESE URBAN RESIDENTS DURING THE COVID-19 PANDEMIC: A CHOICE-BASED CONJOINT ANALYSIS SURVEY

Abstract ID: 760
Individual Paper

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As a global public health event, the 2019 coronavirus disease (Covid-19) epidemic may profoundly impact the housing location preferences of urban residents. Studies have initially identified changes in housing location preferences. Still, the importance of the various housing factors (e.g., housing price and locational attributes) in housing preferences and their changing trends during and after the pandemic have not been quantified, nor have the population heterogeneity characteristics of housing preferences been explored in depth.

To address these knowledge gaps, this study designs and implements a stated preference survey to gauge the pandemic-induced changes in residential preferences. Specifically, the choice-based conjoint analysis approach is used to ask respondents to choose houses with different housing factors (rent-to-income ratio, commuting time, school district rank, accessibility to commercial facilities, and accessibility to public services) in three scenarios: pre-epidemic, mid-epidemic and post-epidemic. The housing factors are selected according to the literature and relationship with Covid-19. Information on the demographic characteristics of the respondents was also collected. The study identified 81 sample cities based on a probability proportional scale sampling method and conducted a large-scale residential preference web-based questionnaire survey using a quota sampling method to recruit respondents from urban residents aged 18-65. The questionnaire collection process carried out in three phases from December 2022 to March 2023 was finalized with 8,453 completed questionnaires.

As for analytics methodology, discrete choice models are employed. Based on random utility theory, the conditional logit models will be used to identify the differences in housing preference and the mechanisms at play in the three scenarios. And the latent class logit model will be used to explore the heterogeneity of housing preferences.
preferences, which can capture underlying, unobservable discrete segmentation of residents. Initial explorations by the conditional logit models are currently underway. Separate models were developed for all respondents and those in different industries and household incomes. Three findings emerged from the current analysis: firstly, the relative importance of factors varied across the three scenarios, with rent, education, and commuting remaining the most critical, while accessibility to cultural and sporting and commercial, and recreational facilities does not have a significant impact on preferences. Secondly, the epidemic did trigger a change in urban residents' preferences for influencing factors, which can be divided into three categories: inverted V-shaped, including “school district rank” and “accessibility to public transport stations”; V-shaped, including "accessibility to life service facilities", "accessibility to local shopping facilities" and "rent-to-income ratio"; and linear shape, including "accessibility to open space"(increasing) and "commuting time"(decreasing). Thirdly, all three scenarios show a greater diversity of factors considered in housing choice by urban residents working in the tertiary sector of industry and with middle income, which provides clues for the latent class model.

This study will be used to infer respective and collective spatial impacts of residential preferences of Chinese urban residents in shaping the post-pandemic world, thus providing a theoretical basis and policy guidance for urban housing spatial planning. Using the latent class model results, the different groups affected by the epidemic can be better identified for more targeted housing planning. Moreover, this study will provide an evidence base of residential preferences in Chinese cities as a complement to this topic in its international context.

Citations


Key Words: Residential location preferences, COVID-19 pandemic, Choice-based conjoint analysis, Heterogeneity, Random utility theory

HOUSING MARKET IMPLICATIONS OF HOMEBUILDER CONCENTRATION

Abstract ID: 783
Individual Paper

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Homebuilder concentration has increased significantly over the past several decades. This concentration has been at least partially driven by the merger and acquisition of local and regional firms by large national homebuilders (Wissoker 2016), and then accelerated in the aftermath of the housing crisis of the mid-2000s when many builders filed for bankruptcy. Indeed, Ahluwalia et al. (2022) found that the nation’s 100 largest builders accounted for 49...
percent of all new single-family home sales in 2020, up from 36 percent in 2002.

In theory at least, increased concentration of homebuilding could lead to more homebuilding activity in housing markets through scale in land control, relationships with subcontractors, favorable access to capital and building materials, and knowledge of local regulatory environments (Abernathy et. al 2002). On the other hand, increased builder concentration might also reduce homebuilding activity as less competition enables large firms to exercise monopolistic or oligopolistic powers. Cosman and Quintero (2021), for example, find that increased concentration was associated with less housing production in markets in the Northeast in 2005-2016.

Still, little is known about how homebuilder concentration varies across US housing markets, how concentration has changed in these markets, and how concentration is associated with other housing market outcomes in a broader subset of markets. This paper will build on the existing literature, and pursue the following research questions:

- How does homebuilder concentration vary across housing markets and by housing market characteristics? How has homebuilder concentration changed over time in these markets?
- Is higher homebuilder concentration associated with higher or lower levels of homebuilding?

To address these questions, we use data on new home sales in the country’s 50 largest homebuilding markets from Builder Magazine’s Local Leaders List, along with supplemental data on metro area characteristics from the US Census Bureau’s American Community Survey and other sources. Examining the period from 2009 to 2021, we will employ both descriptive statistics and time-series regression models to identify the extent that homebuilder concentration varied across markets, changed over time, and how concentration was associated with housing production, controlling for time-varying and time-invariant market characteristics.

Our preliminary findings for 42 markets with consistent data available suggest that homebuilder concentration—the share of new single-family home sales by the 10 largest builders in a market—was generally higher in smaller markets, as well as markets with lower home values, newer housing stocks, and with lower household incomes. Homebuilder concentration also increased in most housing markets from 2009 to 2021. For example, the share of new home sales in a market by the top 10 builders increased almost 13 percentage points on average for the entire sample over this period, though increases were greater than average in metro areas as diverse as Las Vegas, Minneapolis, and Washington, DC. Lastly, preliminary time-series regression models suggest that higher homebuilder concentration was associated with a small but statistically significant increase in the amount of homebuilding, controlling for metro area demographic and housing stock characteristics, as well as home values and unemployment rates. These results are robust to different measures of housing construction and inclusion of survey-based measures of land-use regulatory stringency.

This research will have two primary contributions. First, it will advance scholarship on homebuilder concentration across US housing markets and its association with select market outcomes including the amount of housing produced. Second, our research will consider the implications for policymakers and planners, especially with respect to the supply of housing, land-use regulations, and planning for household growth.

Citations


Key Words: Housing, Housing supply, Land use planning, Housing development

LESS HAPPY WITH THE SAME: THE ROLE OF MIGRANT COMPOSITION IN SHAPING THE NATIVITY GAP IN NEIGHBORHOOD SATISFACTION IN THE NETHERLANDS
Abstract ID: 792
Individual Paper

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Lower levels of housing and neighborhood satisfaction have been related to constraints in income, housing tenure, household type, housing attributes, and neighborhood conditions. However, socioeconomic profiles and objective housing and neighborhood characteristics cannot explain all the variations in the satisfaction gap between migrant and native households. This paper sheds new light on the role of neighborhood attributes, specifically the migrant composition, in shaping the nativity gap in neighborhood satisfaction in the Netherlands by investigating whether there exists an interactive effect of migrant status by migrant composition. The study runs ordered logistic regressions using the 2018 and 2021 waves of the comprehensive national survey on housing conditions and satisfaction in the Netherlands. The result shows that migrant households are similarly satisfied with the living environment when living in a home and neighborhood of the same quality as non-migrant households. However, when the interaction term between the migrant households dummy and neighborhood migrant composition is included, the key results indicate that the nativity gap in neighborhood satisfaction varies as the migrant composition changes: migrant households express lower satisfaction with the neighborhood’s living environment than their native counterparts when the share of migrants in the neighborhood is less than 17%. Constraints in migrant households’ accessibility to particular amenities and social interactions are possible explanations for this satisfaction gap in native-majority neighborhoods. The paper contributes to the housing satisfaction literature by explaining the nativity gap in residential satisfaction with neighborhood characteristics, which has implications for immigrants’ preferences for amenities, constraints in social interactions, and their integration into the settlement society.

Citations

Key Words: residential satisfaction, migrant composition, Netherlands

THE IMPACT OF SHORT-TERM RENTALS ON NEIGHBORING HOUSING TRANSACTION PRICES IN THE SOUTH FLORIDA REGION
Abstract ID: 800
Individual Paper
Short-term rentals, such as Airbnb vacation rental properties, have become prevalent in local communities after the invention of peer-to-peer home-sharing internet platforms (DiNatale, Lewis, & Parker, 2018). These properties are particularly popular in resort towns and tourist destinations. Many local stakeholders are concerned about the impact of these short-term rentals on local housing market conditions, notably how these properties might potentially increase property values and rents, therefore reducing the inventory of affordable housing, making housing less affordable, and facilitating gentrification in local communities (Chen, Huang, & Yan, 2021; Garcia-López et al., 2020). While Airbnb provides lodging in cities where hotels are not easily available, in other places these properties have placed pressure on the tight housing market and drawn complaints from residents about noise, excessive traffic, and other externalities (DiNatale, Lewis, & Parker, 2018). Studies on short-term rentals have mostly focused on short-term rental regulations (e.g. Chen, Huang, & Yan, 2021; DiNatale, Lewis, & Parker, 2018), the impact on property price and rents (e.g. Garcia-López et al., 2020), and user comments and preferences (e.g. So, Oh, & Min, 2018).

A study in Barcelona, Spain, about the impact of Airbnb on housing price indicates that Airbnb listings have increased rent by 1.9%, transaction prices by 4.6%, and posted prices by 3.7%, therefore generating substantial impact on neighborhoods (Garcia-López et al., 2020). A study in Washington, DC also indicates that having Airbnb in the neighborhood can significantly inflate housing prices (Zou, 2019). Within the U.S. housing market, the South Florida region is an ideal setting to study housing market dynamics due to its pull factors that attract residents and tourists from other states and countries. The region is a prime destination for tourism, retirement, and winter homes due to its amiable climate, pristine coastal environment, and the cultural diversity of its municipalities. Therefore, short-term rentals such as Airbnb are prevalent in the area. Housing prices in the region have increased drastically during and after the COVID-19 pandemic and there is a severe shortage of affordable housing. The lack of affordable housing is presumably exacerbated by these short-term rental properties. To explore the magnitude of the impact, this study focuses on Broward County, FL, attempting to answer the following questions: 1) Where are Airbnb listings located and what are the spatial characteristics of these properties? 2) What are the housing and neighborhood characteristics of these properties? And 3) How do these properties impact housing transaction prices of neighboring properties?

The study uses the Airbnb listing data for June 2022, September 2022, and December 2022, from insideairbnb.com, the property parcel tax roll data in 2022, and the 2021 5-year American Community Survey data to help answer these questions. Maps of the property locations will be generated, combine with maps of neighborhood attributes, to illustrate the spatial pattern of these properties. Housing transactions adjacent to Airbnb properties within quarter-mile and half-mile radii are used to explore how these Airbnb properties influence the transaction price, controlling for housing and neighborhood attributes. Based on insideairbnb.com, as of December 2022, there were roughly 16,478 properties listed as Airbnb properties in Broward County. The listing does fluctuate by days and time. The highest concentration of these properties is in coastal municipalities. About 95.6% of these listed properties are for short-term rentals, 83.4% of these listings are for the entire home/apartment, 15.5% for private rooms, 0.8% for shared rooms, and 0.3% for hotel rooms. Around 72.1% of listing hosts have multiple listings, and the top host has over 300 listings. After exploring the determinants of spatial distribution and its impact on housing transaction prices, we discuss policy implications under the state’s legislative restrictions.

Citations


Key Words: short-term rentals, housing price, affordable housing

COUNTER-MAPPING BEIRUT'S RENTAL SECTOR

Abstract ID: 808
Individual Paper

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Tenants are hard hit by Lebanon’s ongoing collapse. With the Lebanese currency losing more than 97% of its value over the past three years, the financial crisis strikes at the heart of the right to housing, threatening many with eviction and forcing most to choose between healthcare, food, and a roof over one’s head. In this context, the rental market’s laissez-faire regulatory framework means that tenants are left to navigate an information scarce field in highly asymmetrical relations with private landlords (Blomley, 2019). In many ways, the conditions of Beirut’s tenants resemble those of numerous other cities where housing is squeezed between speculative investments and financial crises (Rolnik, 2013). These conditions pose important challenges for planners invested in the right to housing, particularly in contexts where weakened state agencies cannot support the right to housing. Echoing earlier initiatives (e.g., the anti-eviction mapping project, find my landlord, Housing Data Coalition) that explore the potential of disruptive mapping to empower tenants and secure more equitable housing conditions, this research reports on and reflects on a recently built online platform at the Beirut Urban Lab, the City of Tenants.

The City of Tenants project starts from the premise that publicly accessible information empowers tenants. It proposes a user-fed database and visualization tool that places data about existing rental arrangements in the city in the hands of home seekers, tenants, researchers, and housing advocates. The platform hosts a map documenting actual rental conditions and prices recorded by tenants living in the city for tenants seeking adequate rent. By doing so, the platform alters the narrative of who maps and who sets the tone. Against a space dominated by landlords who advertise speculative rental listings, the City of Tenants platform counters with a tangible picture of tenancy conditions and experiences in today’s Beirut. Thus, “actual” prices counter-map the inflated “asking” prices and question the speculative imaginaries that dominate the rental market.

With a first dataset of more than 2,300 rentals within Municipal Beirut collected between December 2021 and December 2022, early findings first point to the deep injustices in the rental market, making the platform an adequate tool to render visible flagrant inequalities. It is thus evident that Beirut’s landlords charge significantly different rates for similar housing conditions. These findings further point to the heavy burden of rent, reaching up to 80% of a household income. The findings also show a high level of transactional informality, with more than 50% of households relying on oral contracts and only 25% on formally recorded contracts.

In sum, the platform provides a corrective measure to the dearth of information in Beirut. It remains however unclear whether it will serve as a promising commons that empowers individual or collective resistance. Moreover, information is no substitute for a corrective revision of the (formal and informal) regulatory frameworks that
govern today’s housing market. It therefore remains urgent to institute efficient rental protection, curb speculation, and more generally recognize constitutionally and operationally the social value of land.

Citations


Key Words: Housing Rental Markets, Counter-mapping, Lebanon, Tenancy conditions, Housing Affordability

EXPERIENCES OF VULNERABLE HOUSEHOLDS IN LOW-ATTENTION DISASTERS: MARSHALLTOWN, IOWA (UNITED STATES) AFTER THE EF3 TORNADO

Abstract ID: 811
Individual Paper

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This research explores the experiences of vulnerable households in the aftermath of the EF3 2018 Tornado that hit Marshalltown, Iowa (United States). The study focuses on low-attention disasters, which are often overlooked in the media and by policymakers, but can have significant impacts on vulnerable populations. Discussions on consequences of low-attention disasters are mostly confined to developing countries in the literature. Few studies address the manifestations and consequences of low-attention disaster in the global north. Our case study of Marshalltown adds to the literature by highlighting an example of neglected disasters in the developed countries, and its consequences for the vulnerable population and low-income households. Using qualitative data from interviews with low-income, minority, elderly, and disabled households in Marshalltown, the study examines the challenges faced by vulnerable households in the aftermath of the tornado. The results indicate that vulnerable households faced unique challenges, including limited access to resources and communication barriers. When there is less aid available to distribute, those in need and vulnerable are more likely to have even more difficulty accessing aid compared to times when more aid is available. These challenges were compounded by pre-existing inequalities and systemic barriers that exacerbated the impacts of the disaster. This shows that while there are major differences between countries in terms of the amount of available housing recovery resources, neglected needs and lack of access to resources in low-attention disasters leads to comparable consequences in different places.

Citations

Two major demographic trends— the rapid aging and racial diversification of the U.S. population— have collided with spiraling housing costs to spur a homelessness crisis among older adults of color. By virtue of being homeless, elderly, and racially minoritized, this group is triply disadvantaged and likely at exceptionally high risk of adverse outcomes, especially amidst the COVID-19 pandemic (Finnigan 2020). Despite the growing size and acute vulnerability of this population, recent studies typically examine the experiences of racial minorities (Fowle 2022) or older adults (Culhane et al. 2019), separately, rather than both simultaneously (cf. Paul et al. 2020). This study applies an intersectional lens to quantify the chronic homelessness risk faced by older adults of color and to identify the most effective housing-based interventions to reduce it.

To this end, we address three key research questions: (1) How does the risk of chronic homelessness vary between (a) older (age 55+) and younger adults overall; (b) older versus younger adults of color; and (c) Black, Latino, and White older adults?; (2) What types of housing programs (i.e., Interim Housing/IH, Permanent Supportive Housing/PSH, Rapid Re-Housing/RRH) do older adults of color disproportionately access?; and (3) Does the effectiveness of these three housing program types in reducing chronic homelessness risk vary among Black, Latino, and White older adults?

Given research documenting the unique housing and health challenges experienced by minoritized groups and among older adults (Brown et al. 2022), separately, we expect that older adults of color experience a considerably higher probability of experiencing repeated episodes of homelessness than do older white adults or younger adults of color. Despite this elevated risk, older adults of color— especially Black older adults— may be less likely to gain access to intensive housing programs like PSH than White older adults because Black individuals at risk of homelessness tend to rank lower on PSH eligibility criteria (i.e., VI-SPDAT scores). Conditional on receiving any housing support, we expect PSH to be particularly effective in reducing chronic homelessness risk among Black and Latino older adults, reflecting the particular importance of PSH-provided health and social connectivity supports for these groups.

To test these hypotheses, we employ the California Policy Lab’s Research Accelerator dataset (a de-identified extract of Homelessness Management Information System data), which tracks all individuals interfacing with Los Angeles County’s Continuum of Care from 2010 through 2020 (person N=278,243). We use these data, first, to descriptively characterize differences in chronic homelessness risk and housing program type access by age and race subcategories. Second, we construct multivariate models predicting the probability of chronic homelessness and of accessing the three key housing program types (PSH/IH/RRH) to assess whether older adults of color exhibit distinct risk and program access profiles compared to older White adults and younger adults of all races, net of potential confounders (e.g., gender identity, disability, veteran status). Third, we use multivariate models to gauge whether accessing PSH, IH, and RRH programs reduces chronic homelessness risk for the population as a whole—
and disproportionately for Black and Latino older adults.

Preliminary findings support some of our initial hypotheses and refute others. Among adults who interfaced with the Continuum of Care from 2010 through 2020, older Black adults—specifically those age 55-64—indeed exhibited higher chronic homelessness risk (25%) than did any other race-age combination. However, program participation patterns allayed concerns that this elevated risk would not translate into higher rates of PSH access; older Black adults were slightly more likely to receive PSH than were other age-race groups. Next, we will assess whether these PSH programs were particularly protective against chronic homelessness risk for older Black adults, as we expect.

Citations


Key Words: homelessness, older adults, racial inequity, intersectionality, permanent supportive housing

PATTERNS OF ACCESS AND ROLE OF FINANCIAL RESOURCES IN HOUSING RECOVERY: EVIDENCE FROM LUMBERTON, NC AFTER HURRICANE MATTHEW

Abstract ID: 816
Individual Paper

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Housing repair and reconstruction are among the strongest indicators of a community’s recovery after a disaster. The literature has shown that the rate and the completeness of housing recovery have consequences for economic, commercial, household, and emotional recovery after disasters. Housing restoration and recovery pose a large financial burden on households, and access to financial resources— in the form of insurance payouts, federal aid, loans, and assistance from Non-Governmental Organizations (NGOs) or family & friends—determine whose home and which neighborhoods recover more quickly. In this paper, we provide an in-depth quantitative analysis of the impact of financial resources and assistance on housing recovery based on housing surveys we conducted after Hurricane Matthew in Lumberton, North Carolina. This study attempts to answer two key questions: Does access to recovery resources (in terms of types and timing) correlate with damage levels and household social vulnerability? Do resources lead to homes recovering faster after controlling for different damage levels and social vulnerability? Our analysis provides insights into disparities in access to financial resources, types
of resources accessible to households, and how quickly they receive financial assistance. The findings show variations in the effect of various financial resources – insurance, federal and non-federal assistance – on housing repair and reoccupancy times. Importantly, the results also show that housing recovery progress is determined by socioeconomic status of residents and the level of damage to the house. We offer policy suggestions to improve post-disaster housing recovery in a more timely and equitable manner.

Citations


Key Words: Housing recovery, financial resources, community resilience, disaster, insurance

PANDEMIC HOMEBUYERS: WHO WERE THEY AND WHERE DID THEY PURCHASE HOMES?

Abstract ID: 824
Individual Paper

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The COVID-19 pandemic scrambled housing markets, as many households held off on moves while others decamped from central city locations to homes in suburban areas or in smaller metros (Frey, 2022). At the same time, record low interest rates and a desire for more space prompted many households to purchase homes. This homebuying activity and migration decisions driven by the ability to work remotely pushed up home values in 2020 and 2021 (Mondragon & Wieland, 2022) until interest rate increases in 2022 began to slow the homebuying market.

Economic impacts from the pandemic were felt unevenly and remote work was more available to higher-income workers. Early evidence suggests that higher-income movers were more likely to move out of cities to new locations (Haslag & Weagley, 2021; W. Li & Su, 2023). Home price increases were driven by the availability of remote work (Mondragon & Wieland, 2022) and more likely to be concentrated in more affordable suburbs and smaller cities, rather than in dense large cities (X. Li & Zhang, 2021). News reporting suggested that the entrance of new higher-income remote workers put pressure on the affordability of local housing stocks in these new locations, limiting the options of long-time residents.

Using data from the Home Mortgage Disclosure Act, this paper examines the characteristics of pandemic homebuyers and where they purchased. It evaluates to what extent and in what types of metros home purchases were disproportionately concentrated among higher-income homebuyers relative to lower- and moderate-income buyers and where purchases by White buyers were concentrated relative to those made by people of color. It also studies the spatial patterns of these purchases, observing whether the purchased homes are urban or suburban and in what types of metro they are located. By comparing pandemic purchases to historic purchase patterns, this paper assesses to what extent higher income and Whiter households displaced lower-income and/or buyers of color, or whether these purchases were a continuation of historical patterns.

While some pandemic moves may have been temporary and some households may be returning to neighborhoods closer to their offices, home purchases, by their nature, tend to be more long-term than moves in the rental market. Additionally, the rise in interest rates and subsequent plateauing (and in some cases declines) in home
prices may keep many pandemic buyers in their homes longer than anticipated, as moving may result in selling for a loss or needing to finance their new purchase at a higher interest rate, making it less affordable. As a result, there may be longer-term impacts for the neighborhoods that experienced elevated pandemic homebuying activity. Shifts to suburbs or smaller metros have implications for residential segregation, regional economies, and commute patterns and transit use. Neighborhoods where home prices surged dramatically may experience some price stickiness, as the recent homebuyers are reluctant to sell at a loss, locking in unaffordability or limiting for-sale inventory for those that were shut out of the homebuying market. If historical populations have been displaced, there could be new places of gentrification or other types of demographic change. Conversely, these pandemic buyers may represent a continuation (albeit exaggerated) of pre-pandemic trends. Therefore, it is important to understand the makeup of recent purchases in order to design planning policy responses.

Citations


Key Words: COVID-19, homeownership, neighborhood change, suburbs

EPISODIC OR PERSISTENT? HOUSEHOLD EXPOSURE TO HOUSING COST BURDEN

Abstract ID: 835
Individual Paper

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The high and rising cost of housing relative to income in the United States is a major concern for households and has potentially far-reaching effects. The median sales price of single-family homes sold in the U.S. has increased 25% while average rent has increased 18% in recent years, outpacing median income (U.S. Census and HUD, 2023; U.S. BLS, 2023). Living in unaffordable housing is associated with increased probability of material hardship, physical and mental health problems, and housing instability (Bentley et al., 2011; Desmond, 2015; Glynn et al., 2021; Meltzer & Schwartz, 2016; Pollack et al., 2010; Taylor, et al., 2007). Further, high housing costs relative to income could reduce access to opportunity, increase traffic congestion, depress economic growth, and contribute to climate change (Acolin & Wachter, 2017; Cervero, 1996; Gyourko et al., 2013; Hsieh & Moretti, 2019). However, there are questions about the incidence and duration of exposure to unaffordable housing.

Prior work suggests housing affordability problems are widespread but many studies are based on cross-sectional data, which means little is known about households’ repeated exposure over time to high housing costs relative to income. For example, more than three out of ten U.S. households each year are considered housing cost burdened, i.e., pay more than 30% of income toward housing (Dumont, 2019; Fernald, 2019) but these are not necessarily the same households from year to year. Studies using panel data have focused on very low-income renter households, renter households before and after a massive economic downturn, and describe experiences from more than a decade ago (Colburn & Allen, 2018; Martin et al., 2005; Susin, 2007). The housing cost burdens of a broader set of households, outside of a major economic shock, and during more recent years are unknown.
This paper examines the incidence and repeated exposure to housing affordability problems for renter and homeowner households. Using multivariate logistic regression analysis of the Survey of Income and Program Participation, we examine housing cost burden experienced by the same household reference person and their household members from 2014 to 2017. We find that more than half of households experienced housing cost burden in at least one year, 19% experienced it in only one year, and just 9% experienced it in all four years. Low incomes, renting, and households with children are associated with a higher probability of both episodic and persistent housing cost burden, as expected. However, demographic characteristics like race, ethnicity, gender, and educational attainment, are not consistent predictors, controlling for other variables. The results suggest that exposure to housing cost burden—and its associated effects—may be broader for episodic housing cost burden and more concentrated for persistent housing cost burden than previously believed.

Citations


Key Words: affordability, cost burden, housing cost

WHAT ABOUT SAFE AND DECENT HOUSING THAT'S AFFORDABLE?

Abstract ID: 863

Individual Paper

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This paper addresses a specific dimension of the affordable housing crisis affecting most metropolitan areas in the U.S. The research focuses on the age and condition of existing housing supplies with respect to health and safety in anticipation of extreme events. The research analyzes how proactive planning responses can minimize potential human and physical impacts of extreme events generally defined as disasters where the risk is a function of an area’s hazards and the levels of susceptibility—human, economic, environmental - to harm or the vulnerabilities of those exposures. Climate change has worsened the frequency, intensity, and impacts of extreme weather events, including sea level rise increases and the impacts of major hurricanes in coastal areas. A healthy and sustainable community ensures the availability of safe, decent, and affordable housing. Safe and decent housing supports the health of its occupants and provides shelter from the elements, especially during and after natural disasters. This is especially important for lower income populations who do not have the financial wherewithal to control for these necessities. The structural damage and devastation of human settlements caused by these more frequent and intense extreme events is well documented. Following Hurricane Katrina, more than 400,000 individuals were displaced from their homes in New Orleans. The dearth of housing options for lower-income residents following Hurricane Katrina resulted in many residents not returning to New Orleans. In South Miami-Dade County, Hurricane Andrew highlighted the vulnerability of Florida’s building standards at that time. The Category 5 hurricane damaged or destroyed more than 125,000 homes and left an estimated 250,000 people homeless.

This paper describes the research to locate Miami-Dade County’s most vulnerable housing structures and at risk populations. Vulnerable housing structures were defined as structures built prior to the 2002 Florida Building Code
which included standards to ensure structures would withstand major hurricane-level winds, the appraised value of the structures, and evidence of structural upgrades. The research methodology applied a Community Distress Index (CDI) supported by ArcGIS Pro geocoding and visualization to establish and visualize the concentrations of unsafe housing structures and pair them with communities and populations in distress, including COVID-related socioeconomic vulnerabilities. The analysis found the highest concentrations of older, unsafe housing structures in Miami-Dade County located in less affluent communities already experiencing the health and economic impacts of the COVID-19 pandemic including, Homestead, Little Haiti, and Liberty City. Most of these structures were constructed using the same building methods and materials for homes constructed in the path of Hurricane Andrew.

The research findings provide a foundation for strategic targeting of high risk structures and economically distressed geographical areas and policy direction for creating a more resilient housing supply for the most vulnerable populations. The potential impact of the geodesign framework provides a more holistic and integrated view of affordable housing, public health, safety, and extreme weather events. This lens enables local governments to develop more accurate risk and capacity assessments (VCAs) by categorizing residential structures according to wind and flood vulnerability; determining whether the existing housing supply is adequate to house the displaced; plan for temporary housing needs; and providing plans for assisting local governments in conducting more rapid analysis to justify investments in housing rehabilitation.

Citations


Key Words: Housing Safety, Vulnerability, Extreme Events, Community Distress, Disaster Planning

HOW DO RENTERS SURVIVE UNAFFORDABILITY? HOUSEHOLD-LEVEL IMPACTS OF RENT BURDEN IN LOS ANGELES

Abstract ID: 876

Individual Paper

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Prior research shows that households reduce consumption of basic necessities in response to increasing rent burden. Research on the household impacts of rental affordability has often used large administrative datasets to identify broader, population-level patterns among impacted households. The research consistently finds that after households exceed a 30 percent rent-to-income ratio—and become rent burdened—they begin to make impactful tradeoffs in food, energy, healthcare, education, and other spending categories that affect their quality of life, which ultimately produce inferior socioeconomic and emotional outcomes for adults and children (Gabriel &
However, questions remain regarding the interrelated, cumulative tactics renters use to survive. Beyond the established links between rent burden and household consumption, it is also critical to understand the mechanisms by which rent burden operates and its broader, complex effects on other aspects of daily life. Such inquiry requires additional data not commonly available in administrative datasets and national surveys like the American Community Survey, Panel Study of Income Dynamics, or the American Housing Survey.

We use primary data from an in-person survey to respond to the following questions:

1. What short-, medium-, and long-term consumption cutbacks do households make in response to affordability?
2. Do residents make functional adjustments, by altering their housing and employment situations, in response to affordability?

We address these critical questions by leveraging data from 794 household surveys from a large-scale, door-to-door, geographically stratified randomly sampled survey conducted in South and Central Los Angeles in 2019. The survey sample is cross-sectional and composed of a family dataset consisting of indicators for each respondent and each household member. We use STATA to perform t-tests for outcome variables related to consumption cutbacks and functional adjustments across rent burden status. We also model this relationship using ordinary least squares (OLS) regression with a range of control variables and robust standard errors. The outcome variables are derived from a series of survey questions that asked residents whether they had made cutbacks in particular consumption areas and adjusted their housing or employment to alter their rent or incomes.

First, we find that rent-burdened households (those paying over 30% of their income on rent) were more likely to reduce consumption and that many consumption adjustments had persisted for years. Second, many households undertook impactful functional adjustments to pursue housing affordability, including working more hours and altering their homes to accommodate more residents. These functional adjustments have not facilitated savings, social mobility, or improved financial health. Finally, we find that many households made both functional adjustments and consumption cutbacks simultaneously, which demonstrates the cumulative hardships caused by housing unaffordability.

Citations


Key Words: rent burden, affordability, housing, renters, coping strategies

TENANT NAVIGATION AS A CRITICAL INFRASTRUCTURE OF CARE
Abstract ID: 886
Individual Paper

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Evictions are a widespread phenomenon in the United States, often leading to the removal of tenants from their homes due to non-payment of rent. Evictions disproportionately impact Black, Latinx, immigrant, and single-mother populations and have damaging consequences for individuals, families, and communities, including homelessness, ongoing housing insecurity, neighborhood inequalities, and severe material and health hardships. The eviction moratorium implemented during the COVID-19 pandemic demonstrated policymakers’ acknowledgment of the troubling consequences of housing loss and insecurity through evictions. Indianapolis is a city with historically high numbers and rates of evictions. In 2021, the City of Indianapolis announced the creation of the Tenant Advocacy Program (TAP) to address the increase of COVID-related evictions in Marion County with funds from the American Rescue Plan Act. Developed in partnership with non-profit legal services organizations, the program sought to place a Tenant Navigator in each Small Claims Court in Marion County, Indiana, to assist tenants with their rental assistance applications, provide information about the eviction process, and work with legal aid organizations to coordinate the provision of legal advice and representation when needed. This article traces the history of the tenant navigation program created in Indianapolis. It evaluates its performance by asking the following research question: how do Tenant Navigators impact the experiences of the eviction process in Indianapolis? Methodologically, I used content analysis of websites and government documents, participant observation, and semi-structured interviews. This study finds that the work performed by the Tenant Navigators goes beyond their job description. The Tenant Navigators often offer general guidance to clients, working as case managers and providing personal support during times of crisis. They go out of their way to find additional resources, recommend social services and assistance, and help through the bureaucracies of accessing such services. Tenant Navigators offer moral support and encouragement to tenants during difficult times, listening to their stories with care and respect. They care genuinely about their work, the people they support, and the communities they are trying to keep together and strong despite so much hardship. There are two main interconnected reasons behind this approach to tenant navigation work in Indianapolis. First, the framework informing the creation and development of the Tenant Advocacy Program came from the communities the program is trying to support, rooted in propositions of care, connection, and affective relations to people and place. Second, such a framework directly informs the selection and hiring of the Tenant Navigators. Most of the Tenant Navigators are individuals who are part of and have deep connections to the communities they work to support. They also have critical knowledge and experiences on the significant adverse consequences of evictions to individuals, families, and communities. Ultimately, the Tenant Advocacy Program is a critical infrastructure of care in which Tenant Navigators provide spaces of care and love to tenants within the demoralizing process of an eviction. Despite its limitations, the Tenant Advocacy Program plays a critical role in shaping the experiences of tenants going through such a process in Indianapolis. Considering the endemic nature of evictions in the United States, urban planners and policymakers should consider such policy intervention to support tenants going through the violent eviction process. This study contributes to the growing literature on evictions and eviction prevention. It provides insights into the making of urban policies that are responsive to and informed by community needs and perspectives.

Citations


Key Words: evictions, tenant navigation, rental assistance, infrastructure of care, United States
UNDERSTANDING THE EVERYDAY LIVES OF THE HOUSELESS THROUGH COGNITIVE MAPS: A HUMAN-CENTERED ANALYSIS OF THEIR HOME TERRITORIES AND NEEDS

Abstract ID: 894
Individual Paper

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Problem: How do the houseless view their world? What are their most important places? What barriers exist? What are the important things that make up what could be considered their homes? These, and many other questions, are what we worked to address by having houseless individuals draw cognitive/image maps of their daily lives.

Research Strategy: In response, this research reports the findings of human-centered cognitive/image mapping exercises with houseless individuals in San Diego and Los Angeles, based on principles set forth in Kevin Lynch’s “Image of the City” (Lynch, 1960). Specifically, this study asked houseless individuals to draw maps (on blank pieces of paper) of their surroundings and daily routines, which were marked with symbols to identify important locations. We then had them mark the important locations on printed maps so we could then geo-code this information.

Findings: From our review, we have found 13 recurring patterns. One of them is that the houseless often travel in regular routes throughout their day, sometimes using transit or bicycling, but often on foot. This speaks to the need for services to be close to where the houseless live to support their mobility restrictions. Some participants were employed, with some choosing to work to collect recyclables or to help clean floors, streets, or shops they frequented. Parks and alleys were marked as places of importance as they offered safe spaces to congregate and travel through. Additionally people need safe storage, adequate toilet access, & better relationships with law enforcement.

Takeaway for Practice: This work can ultimately help promote better quality of life for the houseless by improving the design and planning for shelters and services. Through better access to services and opportunities and better ways to help them meet their most basic needs, the lives of the houseless can be justly improved.

Citations


Key Words: homeless, image maps, urban design, services, social welfare

THE ROLE OF CONTEXT IN FOSTERING INNOVATION IN ACCESSORY DWELLING UNIT POLICIES: A COMPARISON OF CALIFORNIA AND ONTARIO

Abstract ID: 911
Individual Paper
Many municipalities in North America are implementing gentle density programs and reforms to address the housing crisis. ‘Missing little’ refers to the opportunity to add gentle density to an existing home and optimize its single parcel of land; it can be achieved by converting, subdividing or adding to the principal dwelling. Programs allowing for the integration of missing little units represent a potential revolution in land use planning systems that are centered around single-family zoning, should policy mobility occur (McCann, 2011). Yet, implementation in California and Ontario reveal very different results. While California has seen a ‘gentle density revolution’, with a significant increase in the construction of Accessory Dwelling Units (ADU) since 2018, Ontario has seen very few ADUs constructed in the same period (Chapple et al., 2021; CMHC, 2021).

We hypothesize that driving these differences are contextual factors that favor innovation in California while limiting it in Ontario. Both contexts share many similarities in terms of land use planning, notably a long tradition of and cultural attachment to single-family zoning. Moreover, they experience similar barriers to the implementation of the missing little, including zoning, building codes, design and permitting, construction, financing, and outreach. Yet, California offers a local and state context that supports implementation through cross-sectoral communities of practice, social innovation, political consensus, socio-economic segregation, and embrace of regulation in resistance to the national context (Storper et al., 2015). In contrast, Ontario’s context (particularly its political, economic, and social fragmentation) holds it back from rapid change (Taylor, 2019).

For this comparative case study, we draw from multiple data sources: secondary data on ADU permitting and construction, a review of the grey and academic literature about gentle density, and interviews with experts from diverse fields (architects, designers and builders, developers, and municipal actors). Based on this, we compile and compare the emergence of promising practices across the two jurisdictions using mixed methods, augmenting our statistical analysis of the relationship between permitting and policy innovation with our interview findings. We frame this comparison between California and Canada around a broader discussion around how we wrestle with ‘context’ in planning, and how ‘context’ provides both obstacles to and building blocks for planning work. While policy mobility clearly is occurring, there is a need to better understand the role of context specificity and potential challenges to mobilities. Indeed, political, social, economic and cultural factors, as well as considerations around the built environment itself, may influence the acceptance and success of missing little programs.

Our preliminary findings suggest that simple policy mobility may not be enough to ensure successful innovation and implementation, if the context is not supportive. The Californian case demonstrates that for successful results, the removal of ‘first-generation’ barriers, mainly zoning barriers, must be followed by efforts to overcome ‘second-generation’ barriers, mainly barriers related to the lack of awareness and knowledge of missing little practices and programs.

Citations

SCENARIO PLANNING FOR AFFORDABLE HOUSING IN SHRINKING REGIONS: A PILOT PROJECT IN LAKEWOOD, OH

Abstract ID: 913
Individual Paper

CHAKRABORTY, Arnab [University of Illinois at Urbana-Champaign] arnab@illinois.edu, presenting author

This session will share lessons from ongoing research and a pilot project in Lakewood, OH using LegacySP, a scenario planning toolkit for communities that have experienced population loss and economic disinvestment. Scenario planning tools and practices often imply a baseline of growth which hinders the applicability of these tools in regions experiencing declining populations and economic disinvestment. These regions are often challenged by a lack of financial and organizational capacity and austere socio-political dynamics. They require scenario planning processes that are flexible, practicable, and emphasize collaborative decision making and social learning over sophisticated modeling and digital tools. We have developed a toolkit for shrinking regions that emphasizes multi-stakeholder engagement, narrative shifting and storytelling, and best practices for shrinking places to create useful, robust processes despite limited resources.

The research project employs the toolkit to pilot a scenario planning project in Lakewood, OH, that focuses on housing and engages stakeholders around key questions such as — How can the community maintain and increase affordable housing? How has the availability of affordable housing changed over time, and might continue to change in the future? How can scenario planning help identify robust strategies for housing and related issues in the community? The project team includes staff from the City of Lakewood, Greater Ohio Policy Center, University of Illinois at Urbana Champaign, and Lincoln Institute of Land Policy.

The preliminary findings show that scenario planning can be successfully employed in a legacy city context, and can help engage key stakeholders and further affordable housing strategies. The project outcomes include a housing strategy document for the City of Lakewood, a use case to accompany LegacySP toolkit, and lessons for other communities interested in undertaking scenario planning efforts. More information about LegacySP can be found here: https://www.lincolninst.edu/publications/working-papers/legacysp.

Citations


Key Words: Legacy Cities, Affordable housing

FORTY YEARS OF RENT STABILIZATION IN LOS ANGELES

Abstract ID: 930
Individual Paper

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Second generation rent control laws are characterized by "vacancy decontrol" provisions—when a tenant moves out, the price floats to market rate before coming back under control. Vacancy decontrol is justified on grounds that it reduces the risks of landlords letting units decay, or landlords exiting the rental market. But decontrol also suggests that rent control will become progressively less useful as a strategy for affordable housing, because as
time goes by units will turn over and get closer to market rates. Decontrol also implies, by the same logic, that the benefits of rent control will be directly influence by how long a tenant can or does stay in the unit. This paper tests both of those implications, using a variety of data from Los Angeles. I examine four decades of Census microdata, microdata from the American Housing Survey, and unit-level data on rent stabilized units scraped from the Santa Monica rent control registry. The findings suggest that both implications are valid. Rent control can protect tenants from large increases in rent, but as time elapses the tenants being protected will become higher income.

Citations


Key Words: housing affordability, rent control, regulation, vacancy decontrol

WHAT A DIFFERENCE TENURE SECURITY MAKES: EXPLORING VARIATION AMONG LIHTC AND NON-LIHTC PRIVATE MARKET HOUSING TENANTS IN A CHANGING NEIGHBORHOOD
Abstract ID: 938
Individual Paper

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The Low-Income Housing Tax Credit (LIHTC) program is the primary mechanism for subsidized affordable housing production in the United States. Scholarship on the LIHTC program has revealed important features including its geographic patterns and its impact on neighborhood property values. However, relatively less research has explored the experiences of LIHTC tenants themselves. The small literature in this subfield tends to focus on evaluating two issues that are important to planners, housing advocates, and policymakers: relative rent burdens and housing security among subsidized tenants. We build on these contributions with an analysis of data obtained through five years of community-based participatory action research (CBPAR) in the Lacy neighborhood of Santa Ana, California from 2015 to 2018 and again in 2023. While our research supports the findings from the literature with regard to lower rent burdens and higher degrees of tenant security in LIHTC housing, we also find evidence of less overcrowding and better housing conditions as well as subtle differences in how LIHTC tenants evaluated the quality of their neighborhood relative to other neighborhood residents. Our findings suggest that the reduction of threats to tenure security may contribute to an increase in tenants’ positive assessments of neighborhood quality and a desire to remain in the neighborhood.

Citations

- O'Regan, Katherine M. & Keren M. Horn (2013) What Can We Learn About the Low-Income Housing Tax Credit Program by Looking at the Tenants?, Housing Policy Debate, 23:3, 597-613.

Key Words: Low-Income Housing Tax Credit program, tenure security, gentrification

TENANCY PROTECTIONS IN NJ: THE CURRENT STATE OF RENT CONTROL
Abstract ID: 949
Individual Paper

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In a context of exceptionally tight rental markets and rising rents, there has been a resurgence of interest in rent control. Rent control places limits on the ability of landlords to profit in exchange for realizing the social benefit of more affordable housing. As part of a larger project about affordable rental housing in NJ, we sought to understand New Jersey’s decentralized municipal system of rent control alongside a suite of other state and local tenancy protections. This system provides a web of tenancy protections with differential coverage across the state and within municipalities. We sought to understand which municipalities have rent control, what units they regulate, what mechanisms they use to govern rent increases, what happens in the event of vacancy, and which places and people do not have these protections. To do this, we read and analyzed ordinances in the more than 100 municipalities with rent control. Municipalities with rent control are concentrated in the denser parts of the state, but not all communities with a large number of renter occupied units have rent control. And even within municipalities with rent control, many units are exempted permanently or temporarily depending on the intersection of state and local rules. The effect is a varied landscape of coverage that can only be understand in relation to other tenancy protections.

Citations

Key Words: Rent, Housing, Equity

WHAT HAPPENED TO HOUSTON AREA HOMES AFTER HURRICANE HARVEY?: FLOODING, FINANCIALIZATION, FLIPPING, AND FORECLOSURES
Abstract ID: 955
Individual Paper

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Prior research into real estate financialization and consolidation has highlighted how real-estate investment trusts (REIT) like Invitation Homes and American Homes 4 Rent target discounted foreclosed properties at trustee auctions, turning what were once owner-occupied home into rentals, often accelerating racist dispossession. Scholars have shown how these companies have aggressive eviction practices (Seymour & Akers, 2020), how their technological tools represent a shift in real estate labor practices (Fields, 2019), and their specific racist acquisition strategies in the post-foreclosure context (Raymond et al., 2021).

For this Houston-focused research, I add an important contingency to the analysis of single family housing financialization: flooding and climate change, which has largely been absent from past research on this subject. Harris County, Texas, the core county of the Houston metropolitan area, has had at least three 500-year flooding events in the past two decades. In 2017, Hurricane Harvey dropped more rainfall on Harris County than arguably any measured rain event in U.S. history.

Single family homeowners affected by Harvey had the choice to either sell their home or repair. Repair often took years to complete, leading homeowners to financial stress and sometimes foreclosure (Rhodes & Besbris, 2022). In the storm’s more immediate aftermath, local journalistic accounts identified flipper/investors who targeted homes in different neighborhoods based on their sociodemographic profile, and pressured owners into short sales. These two outcomes – short sales and foreclosure – occurred alongside and in complement to the financialization trends mentioned prior.

For this research project I am employing deed recorder and foreclosure auction data, which I already possess, alongside depth polygons of Harvey flooding to examine these three different yet related outcomes of Harvey-flooded homes: 1) foreclosure, 2) short sale, and 3) financialization (as measured by owner-occupied homes being purchased by corporate multi-state landlords). I already also possess a dataset linking LLC names to specific corporations, as employed in a prior project. This current research’s core question, to be answered through a series of logit models, is if flooding accelerated these three different outcomes, taking into account the time passed after Harvey and their potentially sequential nature of these outcomes. (For example, a short sale may precede the property becoming owned by a national investor-landlord).

My preliminary research shows high correlation between national investor-landlord activity, foreclosures, and municipal utility districts (MUDs), a unique type of Texas local government which, in Harris County, often lack funds for storm sewer improvements. Additional preliminary research has also identified specific flippers whose business practices vary extensively. Findings will inform recommendations for reforming the MUD system, along with pointing towards potential issues (e.g., mold removal) for policymakers to address in the suburban areas where national investor-landlords operate.

Citations


Key Words: Financialization, REIT, Houston, Foreclosure
THE CAUSES AND CONSEQUENCES OF BLACK NEIGHBORHOOD LOSS IN CALIFORNIA
Abstract ID: 956
Individual Paper

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Although there is an extensive literature on racial segregation and a number of chronicles of Black life in American cities, there are few quantitative studies of Black neighborhoods. In prior research, I quantitatively summarize the socioeconomic characteristics of urban Black neighborhoods in the U.S. from 1970 to roughly 2020, covering approximately 3,000-7,000 neighborhoods depending on the year.

Findings from this research include an unparalleled decline in the number of Black neighborhoods on the west coast of the country. Over time, these neighborhoods have been among the most advantaged Black neighborhoods in the country, but that advantage is mediated by this precipitous decline in numbers. Among west coast metros, the most extreme case is Los Angeles, which had the fourth most Black neighborhoods in the country in 1970 and 1980 (230 and 282) but fell all the way to 22nd by the 2015-19 ACS (69). This has been covered by others, including Pastor et al. (2016), who document the “Latinoization” of South Los Angeles in particular. But we lack a comprehensive analysis of the causes and consequences of the decline in the number of Black neighborhoods in (and the broader exodus of Black Americans from) major cities on the west coast.

This paper is an analysis of changes to majority-Black neighborhoods in California over time and the role of housing policies and programs in their decline or gentrification. Using data on demographic and socioeconomic composition, housing, employment, and other characteristics to trace their history, paying attention to the policies and housing market characteristics that distinguish stable or thriving Black neighborhoods from those that have shrank or disappeared over time, and especially those policies typically associated with anti-discrimination and fair housing.

Citations


Key Words: segregation, Black neighborhoods, racial discrimination, gentrification

THE CHANGING GEOGRAPHY OF SINGLE FAMILY RENTAL HOUSING IN LUCAS COUNTY, OHIO
Abstract ID: 959
Individual Paper

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Citations


Key Words: segregation, Black neighborhoods, racial discrimination, gentrification
Homeownership rates in the United States peaked at just above 69 percent prior to the Great Recession in 2004. The rates went into a 12-year decline ended by a slight upswing before the pandemic and have now moved slightly downward. The result is that a larger number of Americans are living in rental housing than ever before, and the location and form of that rental housing is changing. There is also concern about the increasing concentration of rental units into the hands of relatively small numbers of large property management and real estate firms. Finally, while the affordable homeownership crisis is well documented, there is also evidence that rental housing has become even less affordable than ownership, particularly for moderate-income families. Indeed, the lack of affordable rental units may be a major contributor to a family’s inability to save for down payments.

This paper examines these issues at a more detailed scale by looking at changing geography and ownership of single-family rental (SFR) housing in Lucas County, Ohio before during and after the housing crisis. Ownership of SFR housing in Lucas County comprises over 50% of all rental housing units and the ownership of these units is increasingly concentrated into the hands of a few large owners who operate in multiple housing markets across the country. Among other issues, large owners have been shown to more likely to evict tenants, and concentration of ownership can increase rents. We want to know how much concentration in the rental market has occurred and where these rental properties are located. We ask who the major corporate operators are, and examine their practices both in Lucas County and other urban markets. We also seek to better understand the reasons and effects of the increasingly rapid changes of ownership of SFR properties, which can change hands multiple times in short time periods.

We have developed a database of SFR housing based on the county auditor’s sales and property tax records that includes hundreds of thousands of sales before, during and after the Great Recession. Working from the present we trace ownership of SFR units back to examine how owner-occupied units were purchased by large corporate owners creating an ownership record that allows us to examine a sample of properties. Using data from the county recorder we examine the details of these transactions, which when combined with publicly available data on corporations, allows us to identify specific ownership and purchasing strategies within particular submarkets. Better understanding the strategies of these corporate owners is essential to help fair housing advocates, particularly those who seek legal solutions, to pursue remedies for individual renters. In addition, local policy makers also need a clearer understanding of these new corporate landowners in crafting fair housing policy from lead ordinances to eviction policies.

Citations


Key Words: Rental Housing, Housing Affordability, Financialization

**AMERICA’S HOUSING MONOPOLIES: CONCENTRATED OWNERSHIP WITHIN AND ACROSS THE AFFORDABLE AND SINGLE-FAMILY RENTAL MARKETS**

Abstract ID: 962
The largest transfer of wealth from tenants to landlords in United States history has occurred since the 2008 global financial crisis. Real estate app Zillow reported that in 2019, renters in the US collectively paid $512.4 billion to landlords. This added to the cumulative $4.5 trillion renters paid during the 2010s, which Zillow estimated was more than the GDP of Germany or greater than the combined market value of Apple, Microsoft, Amazon, and Alphabet. A significant portion of tenants’ rent now goes to corporate landlords and financial investors—asset managers, private equity funds, insurance companies, and real estate investment trusts (REITs)—who have rapidly scaled up their presence in the rental housing market. As recently as 2001, these entities held only 18% of the rental housing stock but now own 47% of rental housing units, making them the largest class of landlords in the market.

Concentrated ownership of housing is a powerful mechanism that shifts wealth from the bottom to the top of society and is a contributing factor driving economic inequality. Evidence suggests that as corporate landlords and investors build market power in rental housing (Charles, 2020; Tapp and Peiser, 2022), it is tenants who pay the literal and proverbial high costs of a concentrated industry. For instance, urban planning scholars have shown that institutional investors are 290 times more likely to evict than small landlords (Seymour and Akers, 2021), and economists find that increases in ownership concentration in a census tract correlate to increases in rent (Linger et al., 2022). Yet attempts to curtail financial and corporate landlords face challenges at the local scale when most urban planners don’t know who owns their city (St-Hilaire et al., 2023) and regulators view transactions across investors as purely ‘financial deals’ that yield no anticompetitive consequences.

This article overcomes these legal and conceptual deficiencies by examining the concentrated ownership of rental housing during an era of financialization. Drawing on a dataset of multifamily real estate transactions taken from the poorest census tracts in the US (so-called “Opportunity Zones”), I develop a methodology for measuring housing monopolies using the Herfindahl-Hirschman Index. After detailing the national geography of concentrated markets, I assess two interrelated strategies firms use to acquire market power and extract monopoly rents. First, I show how and where investors made large scale purchases of rent-regulated, subsidized, and unsubsidized affordable housing. Second, I demonstrate how investors in the single-family rental market stretched their reach into multifamily housing within similar, if not the same, geographic areas. I argue that the monopolization of one segment of housing provides a springboard to establishing dominance in another, creating anticompetitive dynamics across housing in all sectors and wider geographies. The subsequent regulatory framework developed in this article offers three directions policymakers, planners, and activists can take to better protect affordable housing.

Citations

The literature shows that diverse planning mechanisms ensure the inclusion of affordable housing in expensive urban areas. In Philadelphia, United States, popular mobilization gains control over publicly owned land under exclusionary private renovation, with a civic organization that forces municipal governments to reserve land to develop affordable housing. In Toronto, Canada, city governments finance large-scale investments in local infrastructure through land value capture via density bonuses applied primarily to elite high-rise redevelopment in a context of reduced property taxes and municipal financial self-reliance. In Brazil, several municipal governments apply land value capture tools to charge for land value increments establishing city-wide bare floor area ratios (FAR) and charging extra FAR to fund social housing, public services, and other municipal investments. Furthermore, land readjustments offer chances to include affordable housing in large-scale urban operations and increase public sector revenue, with cases from Taiwan, Japan, Colombia, to many other countries.

However, in Chile (a South American country largely deemed ‘neoliberal’ with laissez-faire urban policies), traditionally, urban planning has been unable to counteract urban segregation and residential displacement while being ineffective in capturing land value from elite high-rise housing private developers substantially. Chile’s old-fashioned planning mechanisms face false-choice dilemmas: while reducing FARs increase land values and exacerbates gentrification, laissez-faire high-rise exploitation has enormous impacts on its surrounding territories. Also, affluent borough governments benefit from considerable land tax income in opportunity areas. However, most of the city’s urban unaffluent boroughs barely subsist on a Municipal Common Fund, as Chilean cities suffer from weak redistributive financial instruments.

By conducting a case study analysis focused on several boroughs of Santiago, the capital of Chile, this paper aims to critically analyze new-generation redistributive planning instruments applied in Chile to improve urban boroughs’ land value capture capacities, finance public space betterments, and avoid residential displacement. Official data sources and interviews with key stakeholders comprise the empirical part of the case.

The results show that since 2016, additional FAR is allowed in exchange for affordable housing quotas, urban sustainability measures, and additional contributions to public space. Furthermore, since 2021, private buildings must financially contribute to their surrounding public spaces in proportion to their density rates. However, these contributions are often poorly estimated with little significant or sometimes regressive effects.

More recently, new ‘conditional incentives’ applied to borough-level planning instruments make the inclusion of affordable housing feasible, among other market corrections. For instance, they help to avoid the proliferation of tiny apartments and the spread of interstitial unused land between new high-rise developments, counterbalance shadow-cast problems, and stimulate mixed commercial uses on the ground floors, besides granting specific quotas of affordable housing in elite new developments. However, our study sees that only 10% of the boroughs in Greater Santiago apply these ‘conditional incentives,’ and half correspond to elite areas whose planning apparatuses show the best technical capacities.

In our analysis, we propose ways to improve these instruments with more precise estimations of the charges without generating further market distortions at the city level. This paper also compares the outcomes of these
policies with similar instruments applied in the United States, Canada, and Brazil.

Citations


Key Words: Affordable housing, Inclusion, Land value capture, FAR, Neoliberalism

AFFORDABILITY FOR WHOM? THE IMPACTS OF FOREIGN BUYER TAXES ON BRITISH COLUMBIA AND ONTARIO RENTAL HOUSING MARKETS

Abstract ID: 1003
Individual Paper

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During the mid-2010s, Canada saw a dramatic increase in housing prices, particularly in two of its most heavily populated and globalized urban areas—the Toronto and Vancouver metropolitan areas in Ontario and British Columbia (B.C.), respectively. Housing markets in these areas, which attract large volumes of international labor and capital, were increasingly decoupled from the local economy (Ley, 2017; Pavlov and Somerville, 2020). As political circles, the media, and public opinion blamed foreign investors speculating with Canadian estates, the B.C. and Ontario provincial governments responded by announcing a 15% acquisition tax on foreign nationals or corporations purchasing residential property in designated urban areas in 2016 and 2017. Backed with popular support, these foreign buyer taxes (FBTs) have been expanded to a 20% rate affecting five regions in B.C. and a province-wide 25% rate in Ontario. Building on this momentum, the federal government took an even more drastic measure in January 2023, temporarily forbidding foreigners from purchasing virtually all Canadian properties for two years.

The ostensible goal of the FBTs is to make homeownership more affordable for local residents reducing foreign capital inflows. The limited number of studies on the topic suggest that the FBTs significantly decreased house prices albeit for a short period (Du et al., 2022, Hartley et al., 2021). However, studies have not examined the impacts on the rental market, which is a peculiar omission given the rental market’s role in housing the most socioeconomically vulnerable populations and integrating newcomers. This paper aims to fill the gap in the literature by empirically examining the impacts of FBTs on the rental housing market in B.C. and Ontario. More specifically, I provide two competing hypotheses on the impacts of FBTs on the rental market. Mainstream discourses implicitly assume that FBTs would increase rental affordability by decreasing demand from foreign investors who do not intend to reside in Canada, increasing the supply of housing for Canadian buyers, and allowing more local renters to become owner-occupants (Favilukis and Van Nieuwerburgh, 2021). Renters are also expected to benefit from increased rental stocks in the market made available by less purely-for-profit properties sitting empty. However, I argue that discourses on FBTs have largely ignored that they also target immigrants who already live in Canada or are newly arriving yet lack citizenship or permanent residency. The FBT policy excludes these households from homeownership as well. Given Canada’s preferential treatment of high-skilled immigrants, many of these non-permanent residents have high wealth and earning potential that would allow them to purchase homes. Pushing these groups into the overheated rental market could benefit to-be-homebuyers at the expense of those who remain as renters, who tend to be more socioeconomically disadvantaged or newcomers to the area. Moreover, FBTs may tighten the supply of rental units in the longer run by discouraging developers from
building new housing units.

Using the annual rental market data from the Canadian Mortgage and Housing Corporation, I analyze difference-in-difference models estimating the effects of FBTs at the municipality (census subdivision) level from 2012 to 2021. Results suggest that municipalities, although having the same rate of rent increases pre-implementation, saw a greater increase in average rent over time if they were impacted by the tax. Based on these findings, I analyze the Canadian census data and focus on the Toronto and Vancouver Census Metropolitan Areas to see which neighborhoods (census tracts) saw the greatest increase in rent, focusing on those marked by high concentration and growth of non-permanent residents. The last section discusses the policy and planning implications of my findings in the provincial context.

Citations


Key Words: Housing Policy, Housing Speculation, Rental Market, Foreign Buyer Taxes, Canada

REVIVING THE AMERICAN DREAM: UNDERSTANDING THE EFFECT OF COVID-19 ON SUBURBANIZATION

Abstract ID: 1010
Individual Paper

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The COVID-19 pandemic has ushered in a new era of housing and real estate in the United States. Demand for housing shows little sign of slowing, with shelter accounting for over 70% of the monthly increase in inflation (Bureau of Labor Statistics, 2023). The number of build-to-rent properties—single family homes constructed for renting—increased by 30% between 2019 and 2020 alone (New York Times, 2021). The shift to remote work explains over 50% of the national increase in housing prices since 2019 (Mondragon et al., 2022). American housing preferences are clearly changing, with those who have the ability to work from home seeking more space in which to do so. Are COVID-19 policy interventions associated with a revival of American suburbanization?

Combining COVID-19 shutdown orders with ZIP code-level Zillow data on home values between 2018 and 2022, we conduct a one-way ANOVA test to investigate whether the rents of single-family rentals before, during, and after COVID-19 policy interventions, particularly stay-at-home orders, remain the same within the same ZIP code. We also run LASSO regression to examine whether and to what extent strict COVID-19 orders (as reflected by duration and administrative scale of stay-at-home orders, i.e., state, city, or borough-level) drive the single-family rental market. We expect COVID-19 policy interventions to impact the single-family rental market, with a disproportionate increase in the rents of suburban properties and the demand for square footage. The paper provides quantitative insight into the effects of COVID-19 policy interventions on the single-family rental market, with implications for city planners and the future of cities.

Citations
THE LOTTERY OF LIVING IN WEALTHY NEIGHBORHOODS: EXAMINING THE RELATIONSHIP BETWEEN
SEGREGATION AND EDUCATION IN THE UNITED STATES

Abstract ID: 1018
Individual Paper

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Residential segregation is a structural mechanism that has contributed to exacerbating the economic
disadvantages of marginalized communities and perpetuating inequality in the United States (Rothwell & Massey,
2010). Researchers consider that residential segregation operates through multiple mechanisms that lock people
in places of self-reinforcing disadvantage (Bischoff & Reardon, 2014; Massey & Denton, 1993). Access to high-
quality education is one area in which the effects of segregation are highly pervasive. Still, there is a lack of
consensus in the literature about adequate methods for measuring such impacts. The approaches to measuring
residential segregation have evolved, and newly available data have enabled researchers to measure it more
accurately. With the aim of contributing to the study of residential segregation, this project asks: What is the
relationship between residential segregation and children’s educational outcomes in public schools in
metropolitan areas in the United States?

This project follows three central objectives in order to answer the research question. First, the project seeks to
estimate the relationship between income residential segregation and the academic performance of 3rd-grade
public school students. Second, this study uses census block group-level data to quantify and map the levels of
within-district income segregation in the Northeastern United States metropolitan areas. Lastly, I will measure
two dimensions of residential segregation—evenness and exposure—and analyze whether they affect children’s
academic performance differently.

Using demographic data from the American Community Survey and the Educational Opportunity Project, I
compute two measurements of income segregation and study their relationship with the 3rd-grade students’
standardized math test scores. The study finds that high levels of within-district income segregation are associated
with lower math test scores, controlling for school resources and neighborhood conditions. The results also
suggest that the levels of isolation of low-income families are a better predictor of students’ academic
performance than the degree of proportionality in the distribution of income groups across a geographic area.
Planners and policymakers can use these results to create incentives for constructing more diverse and inclusive
neighborhoods that promote higher integration in public schools.

Analyzing the impacts of residential segregation on children’s educational outcomes is essential for planners to
understand how existing regulations have contributed to consolidating segregated areas. Also, planners can
benefit from understanding the mechanisms sustaining segregation to find solutions that help reduce its pervasive
effects, especially in an era of growing inequality and segregation. This study is relevant to the existing literature
because it is one of the first to use a recently available data set containing standardized test scores for the entire
country. Such a data set allows the project to study the connections between education and residential
segregation in different states in the country. The project also provides a framework and research agenda to
continue studying such relations through a multidimensional and multi-scalar approach. This project focuses on within-district segregation, or microsegregation, whereas most prior studies have analyzed the impacts of macrosegregation or between-district segregation.

Citations


Key Words: Residential segregation, Spatial Segregation, Inequality

A SEQUENCE-BASED ANALYSIS OF FEDERAL HOUSING ASSISTANCE PARTICIPATION
Abstract ID: 1051
Individual Paper

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HUD’s suite of federal housing assistance programs including Public Housing, the Housing Choice Voucher Program, Project-Based Section 8, and other multifamily housing programs form an important national and local ecosystem of support for eligible low-income households. Research and program evaluation has tended to focus on the performance or outcomes associated with participation spells in one program, although there is potential for multiple participation spells across multiple programs and administrative transfers between programs (McClure 2018). Drawing from program administrative data covering more than 16.6 million low-income households receiving federal housing assistance during the period 2000-2017, we describe household-level participation in federal housing assistance programs, as well as the prevalence of transitions between programs. We employ sequence analysis, an approach initially developed in the biological sciences to identify common trajectories of participation (Lee, Smith, and Galster 2017a, Lee, Smith, and Galster 2017b), and then connect these back to household and place demographics.

We find that between 2000 and 2017, the average number of episodes of household program participation was 1.5, and the average length of stay per episode was 10.9 years. During this time period, we observe a net increase of 920,866 total subsidized housing units, with the majority of net growth (798,741 housing units) attributed to the Housing Choice Voucher Program. 1 in 5 subsidized households made a transition between programs during this time period, with some evidence for Housing Choice Voucher recipients to return to that program across repeat spells of program participation, and some evidence for Public Housing to Housing Choice Voucher Program transitions.

Our paper describes these outcomes in more detail, paying particular attention to comparing whether households with multiple spells of participation or program transitions ended up in more favorable neighborhoods when compared to households who did not move or have multiple spells of participation. Findings from this work are particularly important for understanding the evolution of program participation over time, and understanding how the broader ecosystem of federal assisted housing programs may work together to facilitate upward economic and place mobility for low-income households.

Citations

Key Words: HUD, Sequence Analysis, Subsidized Housing, Poverty, Residential Mobility

RETHINKING THE PREDICTABILITY AND TEMPORALITY OF GENTRIFICATION AND DISPLACEMENT IN THE FOURTH WAVE
Abstract ID: 1055
Individual Paper

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Over twenty years ago, Hackworth and Smith (2001) produced an influential periodization of gentrification that ascribed change in the gentrification process to the shifting relationship between state interventionism and phases in the process of accumulation. The resulting temporal schema was described as occurring over three successive “waves” that moved from “sporadic” gentrification in the late 1960s, through an “anchoring” wave in the 1980s, and finally a wave of “post-recession” intensification and expansion in the 1990s. The framework was later extended by Lees, Slater, and Wyly (2008) to include a “fourth wave” beginning in the new century that re-oriented gentrification toward an “intensified financialization of housing” and “pro-gentrification politics.”

While this framework emphasized the “production” of gentrification and formed part of a sustained critique against “consumption” explanations generally, the approach nevertheless preserved an evolutionary temporal structure from the classic, consumption-centric expositions of stage theory. Stage theory, as it was originally proposed by Clay (1979), assumes gentrification unfolds linearly along an evolutionary process through stages principally defined by the changing composition of the gentrifiers themselves and locates displacement within the intermediate stages between the “early” and “mature” extremes of the process. Thus, despite attempts to complicate the process through the introduction of recessionary interruptions, the wave approach maintained this general evolutionary character by continuing to focus on the change in gentrifiers and assumptions about when displacement is thought to occur. Indeed, irrespective of the long history of skepticism (DeGiovanni 1983; Beauregard 1990), the general outlines of stage theory have formed an integral part of efforts to operationalize gentrification with demographic and housing variables that are intended to demonstrate both the existence and state of gentrification according to this general trajectory.

In this essay, I summarize temporal representations of the gentrification process and interrogate both the assumed evolutionary trajectories and the supposed temporality of displacement through three case studies on “fourth wave” gentrification in East Harlem, downtown Los Angeles, and Over-the-Rhine. Observations from the case studies not only suggest significant deviations from stage theory trajectories, but they also draw attention to the complex way that contemporary forms of gentrification in the “fourth wave” both build on previous displacements prior to the initiation of gentrification and incorporate the active disassociation of gentrified space from non-gentrifiers through appropriation and commodification in new housing development. From this I conclude that race, and in particular racial capitalism, is just as important to explaining the process of gentrification as state interventionism or changes in the amalgamated demographics of gentrifiers.

Citations

UNDERSTANDING THE PUBLIC GAZE ON HOUSING: HOW DO THE DESIGNATIONS "AFFORDABLE," "HISTORIC," AND "SUSTAINABLE" IMPACT CONSCIOUS AND UNCONSCIOUS EVALUATIONS OF HOUSING DEVELOPMENTS?

Abstract ID: 1058
Individual Paper

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There is an ongoing affordable housing crisis in the United States with every state and major metropolitan area having a sizable deficit of units for extremely low-income households. A main contributor to this deficit has been the underbuilding of all housing types, and especially small multifamily buildings, for the past two decades (Rosen et al. 2021). Any approach to tackling the affordable housing crisis will need to involve new construction developments, which are commonly subject to public comment during the typical entitlement process. Despite growing awareness of the housing affordability crisis and majority support of hypothetical increases to the affordable housing stock in those surveyed, local public opposition remains a major obstacle for proposed affordable housing developments in practice. Research is needed to understand more fully what is contributing to this local opposition and, ultimately, how to reduce it through various strategies.

Recent studies have found that housing development arguments that are framed positively (Whittemore and BenDor 2019, Matheis and Sorens 2022) or negatively (Monkkonen and Manville 2019) can respectively increase or decrease individuals’ approval of strategies to increase overall housing supplies such as densification. This past work has focused on the efficacy of different written descriptions that outline reasons for supporting or opposing proposed housing in shifting readers’ opinions. As many development proposals are communicated to the public visually, however, there is a need to investigate how images impact public opinion and interact with other aspects of a development presented in accompanying written descriptions (e.g., if it is affordable, historic, or designed with a focus on environmental sustainability).

In our research we aim to answer: How does the public interpret and react to photos of housing developments? Specifically, how do the designations “affordable,” “historic,” and “sustainable” for a development interact with its visual depiction to impact viewers’ conscious and unconscious evaluations? In our pilot study (N = 112), we observed that, compared to an unlabeled baseline development description, the inclusion of the designations “green” and “affordable” negatively shifted participants’ evaluations of the development while the designation “historic” positively shifted evaluations. Building off of these preliminary observations, we are conducting two online studies. The first study uses a between-subjects design where California residents are shown pairs of promotional and aerial images for a variety of affordable housing developments and asked to evaluate each development on several metrics including aesthetics and acceptance. Each participant is presented with one of five possible building designation labels as part of accompanying framing text introducing the developments. An introductory text with no designation labels is also part of the study to serve as a baseline. A second online study has the same experimental set-up as the first and additionally employs webcam eye tracking to investigate how
the public is understanding the built environment by providing an unobtrusive, unconscious measure of participants’ engagement with the images (Hollander et al. 2020).

The results of this research will provide insights into how the public’s perceptions of building types, usage, and features that are cued by both images and descriptions impact their evaluation and acceptance of housing projects. Furthermore, our results can help to understand if participants’ perceptions are impacting their conscious evaluations (self-report responses), unconscious evaluations (eye-tracking data), or both. A more nuanced understanding around public evaluations and reactions to housing developments can help inform strategies to address public opposition that delays or blocks crucial development proposals.

Citations


Key Words: Affordable Housing, Historic, Sustainability, Issue Framing, Eye Tracking

EQUITABLE ENGAGEMENT IN STATE-LEVEL HOUSING PLANNING

Abstract ID: 1060
Individual Paper

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As state agencies commit to better incorporating historically marginalized communities in housing planning engagement, they will seek guidance on how to translate those goals into discrete and concrete actions. In this paper, we present a study conducted for the Oregon Department of Land Conservation and Development (DLCD) to understand how to foreground implementation of the Oregon Housing Needs Analysis (OHNA) with the priorities and needs of historically marginalized communities. We draw on a literature review, our own past research, the professional expertise of our leading researcher, and nine qualitative interviews with key stakeholders in housing and homelessness services to provide guidance on equitable housing planning engagement for the OHNA. Throughout the research we identify preliminary concerns in housing planning engagement, as well as techniques for interpreting more complex and specific planning ideas, and the significance of engagement and data collection that is preferred by and familiar to communities of color and other historically marginalized communities. Our findings suggest that understanding an agency’s willingness to examine agency commitment to racial equity, their willingness to adapt to culturally affirming engagement approaches, and their willingness to follow through with long-term evaluation of metrics relevant to community partners are key to equitable engagement in housing planning. The research also suggests that further evidence is needed from...
processes applying these identified values and techniques to understand the impacts and limitations of equitable engagement at the state level.

Citations


Key Words: Housing, Participatory, Equity, Community, Homelessness

ZONING FOR PUBLIC HEALTH: A HEALTH ASSESSMENT OF THREE LOS ANGELES COUNTY HOUSING ELEMENTS

Abstract ID: 1062
Individual Paper

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Urban planning and health share a bidirectional relationship that is often mediated through elements of the built environment. In the early 20th century, increasing concerns over sanitation and infectious disease in US cities led city planners and social reformers to address poor public health practices and outcomes through zoning and land use. Cities used these tools to segregate land uses and corresponding typologies in the name of protecting the health, safety and general welfare of communities. This included separation of land uses deemed incompatible (e.g., industrial from residential) and the establishment of building development standards that improved ventilation and access to light. Despite this ostensibly noble beginning, these planning mechanisms were also used to justify practices of exclusionary zoning, expulsive zoning and residential segregation. These systemic biases ultimately shaped urban patterns that historically and currently disproportionately harm communities of color and low-income communities.

In California, each jurisdiction is mandated to periodically update its Housing Element that meets regional housing needs and falls in compliance with the state’s General Plan. California law also requires that Housing and Safety Elements be simultaneously updated, creating the optimal setting for an Environmental Justice Element to be created. Together, these elements influence housing stock and quality, local zoning and siting practices, and environmental health conditions. Housing Elements can influence varying aspects of the urban landscape that directly or indirectly influences health, including impervious surface coverage, urban heat island effect, and green spaces.

This session presents preliminary data and analysis of the interaction between land use and zoning, housing, health and environmental justice in three California cities - Culver City, Huntington Park, and Lynwood. We posed the following research questions: How does the Housing Element remedy, ignore, or exacerbate public health
disparities in each jurisdiction? Which strategies and/or actions best address health disparities in the jurisdiction? What are initial hypotheses that may explain the differences between local ambition and action on this issue? Our methodological approach included a rigorous review of the peer-reviewed and gray literature, which allowed for an assessment of the generalizable ways in which land use and zoning impacts health, the development of an analytical code matrix to identify the individual ways in which zoning and land use mechanisms can impact health, and semi-structured interviews with municipal and community stakeholders to fill in gaps from the housing element content analysis.

These methods highlight how zoning and land use are strategically used to create racialized spaces over time, concentrating environmental amenities in wealthier, whiter communities (e.g., public trees and parks) and cumulative hazards and burdens in lower-income, intentionally-segregated communities of color (e.g., freeways and waste facilities). This established pathways for increased incidence of disease, lower life expectancy, greater environmental risks, and climate vulnerability among those deemed disposable in a white supremacist society, trends that we are still observing today amongst frontline communities. Racialized land use and zoning tools coupled with sustained power imbalances cultivate environmental injustices that show up in both our bodies and urban landscapes.

Citations


Key Words: Zoning Ordinances, Health, Housing Policy

SUPPORTING LOW-INCOME HOMEOWNERSHIP THROUGH COMMUNITY LEARNING CENTERS

Abstract ID: 1082
Individual Paper

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Expanding homeownership is frequently touted as a solution to a variety of social and economic inequalities in the United States (Drew 2013). However, homeownership frequently does not live up to the dream for many low-income homeowners. This is because low-income households have difficulty maintaining homeownership due to unstable income and unexpected costs, and they are more likely to buy homes in areas with low or stagnant property values (Reid 2005; Van Zandt and Rohe 2011). Reid (2005) argues that for low-income homeownership to truly serve low-income households, other underlying social economic structures must also be addressed. This research investigates the potential of low-income homeownership to enhance the holistic community development work and vice versa by looking at a low-income homeownership support program based out of community learning centers.

Community learning centers are schools that operate on expanded hours with expanded services for students, their families, and the surrounding community. They offer services like extended learning time, health care, and a variety family support programs. Recent research has demonstrated that with trust and stakeholder buy-in, community learning centers have the potential to serve as catalysts for achieving place-based development
beyond school walls (Bierbaum, Butler, and O’Keefe 2022). In this study, I examine a novel form of CLC programming, a low-income homeownership support, to understand the potential and challenges of (1) using CLCs to promote low-income homeownership and, (2) using homeownership as a means to enhance the effectiveness of CLCs.

The study focuses on the efforts of the Community Learning Center Institute (CLCI) in Cincinnati, Ohio. CLCI is the lead support agency for six schools, and it has recently begun a concerted effort to support over a dozen low-income families from their schools into homeownership. They have done this through a variety of mechanisms, including Habitat for Humanity, partnerships with the county land bank and other non-profits, non-traditional lenders for immigrant families, and cash purchase of low-cost homes with the intent to rehab.

The analysis relies on case studies of eight CLCI families who have recently achieved homeownership through a variety of means. The methods include interviews with the families themselves, as well as interviews with CLCI staff and staff of the other agencies involved. By examining these cases of different pathways toward homeownership from a variety of perspectives, we illustrate which means proved the most and least onerous and how all might be improved. Importantly, we also assess the impacts of attaining homeownership on the families, including how it has affected their children, their overall family well-being, and their involvement in their communities. We also discuss challenges and stresses of the families with respect to maintaining their homes, both physically and financially. We suggest additional supports that will be necessary for these families to attain the desired benefits of homeownership for themselves and the broader neighborhoods served by their community learning centers.

Citations


Key Words: Homeownership, Low-income housing, Community learning centers, Community Development

IDENTIFYING THE LOCAL DETERMINANTS OF COMMUNITY LAND TRUST FORMATION IN SMALL AND MID-SIZE CITIES

Abstract ID: 1105
Individual Paper

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Community Land Trusts (CLTs) are now widely considered as an antidote for the housing affordability crisis. By separating a home from the land, holding the land in a trust and selling the home for its value without the land, CLTs promise to create a permanently affordable housing stock (Hackett et al., 2019; Pierce et al., 2022). Prior
studies have shown that CLTs can also help stabilize neighborhoods at risk of gentrification (Choi et al., 2018) and that clustering of CLT properties can increase nearby property sale prices (Nelson et al., 2020). However, there is yet to be a comprehensive study that explores the factors that contribute to the successful formation of CLTs in any city. In this study, we explore small and mid-size cities (with populations between 50,000-500,000 residents) in the United States to identify what political, socio-economic, demographic, and land use regulatory factors contribute to the establishment of CLTs in those cities. We hypothesize that the local political landscape, along with less restrictive residential land use regulations, have significant contributions towards the formation and growth of CLTs. To test this hypothesis, we developed a comprehensive database of currently active CLTs compiling data from publicly available data sources. City-level demographic and socio-economic data were collected from the US Census, and land use regulatory environment measures were collected from the Wharton Index developed by Gyourko et al. (2021). We developed a Negative Binomial regression model to evaluate the factors that contributed to the number of active CLTs in study cities. Our results show that a higher share of minority and immigrant populations and lower regulatory restrictiveness have positively influenced the creation of CLTs. We conclude with policy recommendations for cities and non-profits working to establish CLTs in their jurisdictions.

Citations


Key Words: Community Land Trust, Affordable Housing, Land use regulation, Shared equity

INFORMAL HOUSING SUBMARKETS AND SOCIO-SPATIAL INEQUALITIES IN AUSTRALIAN CITIES

Abstract ID: 1106
Individual Paper

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Despite ongoing rises in the value of residential real estate; many lower income earners in cities and regions throughout the world are unable to access appropriate housing. Reflecting affordability barriers, discrimination, and a chronic undersupply of social housing, these marginalised groups are increasingly dependent on a variety of precarious and informal arrangements to meet basic shelter needs (Banks et al., 2020; Durst and Wegmann, 2017). Although the submarket contours of formal housing markets are well known – divided by the owning/renting tenure binary; and differentiated by preferences and trade-offs around dwelling attributes, cost and geographic location; informal rental markets are both poorly understood and largely neglected by housing policy makers and planners.
Focussing on three Australian cities which have seen intense housing affordability pressures over the past decades (Sydney, Melbourne and Brisbane), this paper draws on online rental listings data (n=19,410) to answer the following questions: what are the geographies, typologies and scale of informal housing practices in Australian cities? To what extent are housing submarkets visible within the informal rental sector? And how do informal housing submarkets reflect particular socio-economic or socio-spatial characteristics, relative to Australia’s wider private rental sector? Data was collected via web-scraping in August 2021 from three pre-eminent different Australian housing platforms: realestate.com.au, gumtree.com.au, and flatmates.com.au, and examined against Australian Bureau of Statistics (census) and real estate market data, using critical analyses of descriptive statistics, and spatial autocorrelation and clustering techniques.

The paper reveals geographic concentrations of informal housing which correspond to distinct rental submarkets (using housing submarket indicators advanced by the established literature (Rae, 2015; Keskin and Watkins, 2016)); corresponding with cost, tenure arrangements, dwelling type, spatial attributes such as proximity to education or employment centres, and the availability of neighbourhood amenities. However, although these characteristics echo those of the formal housing sub-markets, within the informal housing sector compromises between residential dwelling type or tenure tend to reflect trade-offs between basic features (privacy, security, building safety) and or precarious tenure arrangements. Understanding these informal housing submarkets and their spatial geography across Australia’s major cities reveals how deep socio-economic disparities are expressed and exacerbated by housing wealth and inequality. The findings highlight that digital platforms have facilitated the previously non-marketized informal housing practices into informal rental markets, but these platform also facilitate reproducing existing socio-spatial inequalities among urban residents such as landlords and tenants (Boeing, 2020). The research contributes to planning scholarship and practice by explaining key drivers, related typologies, associated risks and regulatory challenges presented by informal housing practices in Australian cities.

Citations


Key Words: Informal housing, Digital platforms, Socio-spatial inequality, Housing submarkets, Australia

LESS AFFORDABLE HOUSING OPPORTUNITIES IN OPPORTUNITY ZONES: FEDERAL POLICY IMPLEMENTATION ACROSS LOCAL JURISDICTIONS
Abstract ID: 1107
Individual Paper

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The Opportunity Zones program in the United States was established by the Tax Cuts and Jobs Act on December 12, 2017, which contained several significant changes to the U.S. tax code policy (Marcin, 2020). The goal, like previous place-based policy efforts, was to promote investment in economically distressed census tracts.
Individuals and companies investing in eligible opportunity zones can decrease their taxes on capital gains. As investment in these census tracks increases, research on politics, impacts on economic conditions of residents, employment growth, residential property prices, and gentrification continues to expand. However, research on how this policy impacts affordable housing development and preservation is limited due to the policy’s infancy status. This paper identifies potential effects on both low-income renters and homeowners residing in designated opportunity zones. Comparing designated Opportunity Zone census tracks to those not designated, this research begins to examine the program’s effects at a local level using data from the American Community Survey (ACS) for the years 2015 (before program implementation) and 2021 (after program implementation). This localized analysis finds that a number of cost-burdened households paying 30 percent or more of their annual income for housing costs increased significantly in designated Opportunity Zones compared to non-Opportunity Zones. A Difference and Difference analysis was executed using census track data from the United Stated Census Bureau’s American Community Survey and Opportunity Zone census track information from the Department of the United States Treasury to conclude that in the early stages of implementation, Opportunity Zones have a significant impact on affordable housing. GIS mapping is further included to provide a visualization of the increase of cost-burdened households in these areas. The preliminary data indicated that low-income households who live in designated Opportunity Zones are negatively impacted by rising housing costs.

Citations


Key Words: Opportunity Zones, Affordable Housing, Federal Policy, Implementation

"INFORMATION NOT PROVIDED BY APPLICANT:" ASSESSING FAIR MORTGAGE LENDING PRACTICES IN THE AGE OF FINTECH
Abstract ID: 1127
Individual Paper

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This paper examines the increased prevalence of missing demographic information in home mortgage lending application data, its implications for assessing lending patterns, and relationship to credit access. The Home Mortgage Disclosure Act (HMDA) was enacted in 1975 to address concerns that urban neighborhoods and communities of color were not receiving fair access to mortgage lending credit. The Act required that lending institutions report data on loan originations by the census tract of the loan, and subsequent amendments to HMDA expanded reporting requirements to include both loan originations and denials as well as the race, ethnicity, gender, and income of applicants. These data have been used for decades to assess fair lending and identify discriminatory practices. However, their use for such purposes has been stymied by a growing number of loan applications that are missing demographic data—upwards of 25 percent of all applications in 2021. The increased prevalence of missing demographic data is in large part the result of growth in the share of loans originated by non-depository institutions or fintech lenders, who overwhelmingly collect online loan applications. Loans initiated online do not require the lender to submit demographic information unless it is provided by the
applicant. Early research on patterns of missingness in HMDA data and the implications for assessing fair lending emerged during the rise of telephone applications during the mid-1990s (see Deitrick, 2002 & Wyly & Holloway, 2002). However, little work has examined these phenomena in the fintech era.

Drawing from theories of demographic non-reporting and existing work on disparities in mortgage approvals, this paper uses logistic regression and propensity score matching to explore two research questions: 1) what factors predict nonreporting of race/ethnicity on mortgage applications, and 2) does nonreporting of applicant race/ethnicity affect the likelihood of approval? It finds that certain characteristics of the loan application and applicant, as well as neighborhood characteristics are associated with increased odds of nonreporting. Evidence also suggests nonreporting impacts the probability of loan approval. This paper informs efforts to modernize regulatory oversight of mortgage lending markets and fair lending assessment practices, including HMDA’s companion legislation, the Community Reinvestment Act, in light of the changing landscape of mortgage lending. It also underscores the importance of preserving HMDA as a public data collection system from attacks to undermine its reach and comprehensiveness.

Citations


Key Words: housing, mortgage lending, HMDA

THE IMPACT OF HURRICANE SANDY ON RENTS: EVIDENCE FROM NEW YORK CITY

Abstract ID: 1133
Individual Paper

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As natural disasters grow in frequency and intensity under climate change, understanding how these extreme events affect housing availability and affordability is increasingly important. Most studies examining the impacts of hurricanes on the housing market focus on impacts on property values (for example, Ortega and Taspinar, 2017; Yi and Choi, 2020). Yet there is ample evidence showing that low-income and minority neighborhoods are typically more vulnerable to the harmful impacts of disasters (for example, Shirley, Boruff, and Cutter, 2012) and low-income households are more likely to be renters. Theoretical predictions about the impact on rents are unclear. Reductions in supply, renovations, ownership changes and reductions in demand may have countervailing effects on rents and apriori, it is not clear which should dominate. Given that rental data is difficult to obtain, few papers have been able to focus on rents, let alone rents specifically for low-income populations.

This paper aims to fill that gap by asking how Hurricane Sandy affected rents in New York City neighborhoods affected by the storm, how the impacts might have differed for the low-income New Yorkers who receive housing choice vouchers, and the mechanisms behind the observed changes.

I combine unit-level asking rent data from StreetEasy listings, as well as administrative records of HUD’s housing
choice voucher program with spatially detailed information on storm surge heights and flood zones. I also incorporate several sources of administrative data from New York City on property characteristics, renovations, and sales transactions. Using an event study methodology, I find that, by 2014, asking rents in high surge areas had increased from pre-hurricane levels by 2 percent more relative to non-surge areas within the same zip code, and by 2017 they had increased by nearly 4 percent more.

I find even larger impacts for rents charged for the homes where voucher holders live, which by 2017 had increased by 6 percent more in high surge areas relative to non-surge areas. Preliminary analysis suggests differential mechanisms at work. The relative rental increases in the broader market appear to be driven by new buildings, whereas the voucher rent increases appear to be driven by buildings that filed for renovation permits in the year after the hurricane.

Given that rents received by housing choice voucher landlords are heavily subsidized by the government, a critical next set of questions revolves around who bears the burden of these rent increases. As long as the rents landlords charge to voucher holders remain below the allowable rent ceilings, rent increases will be paid for by the local housing agency, as the agency pays the difference between the rent charged and 30 percent of a tenant’s income, up to the rent ceiling. This question of incidence contributes to a burgeoning literature documenting the implicit subsidization of development and habitation of areas prone to disaster risk (for example, Ostriker and Russo, 2022; Baylis and Boomhower, 2019).

Indeed, I find the incidence of these Sandy-induced rent increases generally fell on the government. I find virtually no significant increases in the portion of rent paid by voucher holders in high surge areas compared to no-surge areas in the same ZIP code, and that the payments from the housing authority mirror the increases in the contract rents. These results suggest that vouchers were successful in shielding participants from the fluctuations of the housing market after the hurricane. Yet, the fact that the increases were larger in the voucher program than the broader market, and paid for by the government, raises more questions surrounding the incentives the program is creating for landlords.

Citations


Key Words: Rents, Housing, Climate change, Subsidies, Policy

HOMELESS SHELTERS, NIMBYISM AND THE PUBLIC ENGAGEMENT PARADOX
Abstract ID: 1142
Individual Paper

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In response to chronic overcrowding in Toronto’s emergency housing and other homeless service centres, in 2016, Toronto City Council approved a plan to build 14 new facilities (amounting to 1000 shelter beds) in neighbourhoods across the city. Planners were given powerful tools and funding to implement this mandate, including new by-laws and zoning amendments that redefined shelters as residential use, thus, permitting their provision throughout the city as of right and bypassing otherwise statutory requirements to consult the public. Seven years into the plan, and with an escalating homeless crisis aggravated by the Covid-19 pandemic, most of the projected new shelter facilities are still far from implementation. Despite the progressive elements of Toronto’s shelters bylaw, oppositional rate-payer groups and Not-in-My-Backyard (or NIMBY) mobilizations against municipal shelters and services have continued to create public controversy and mobilize political opposition, ultimately delaying or interrupting implementation and affecting the rights of unhoused people.

Like Toronto, many cities are currently dealing with a significant homelessness crisis. Thus, finding adequate strategies to respond to this public engagement dilemma becomes imperative. The dynamics of antagonisms, interest group formation, and the power of delay used by “neighbourhood defenders” to modify, slow down or block a new development have been extensively documented. Common to various NIMBY standpoints is a protectionist stance towards property values, which stems from the private property rights enshrined in liberal democracies. While there is extensive literature on land-use conflicts and NIMBY attitudes in relation to affordable, supportive, or rental housing developments, there is little evidence on how to address the more practical question of how to deal with an oppositional public when statutory public meetings are not required.

In this article, we contrast the experience of Toronto with shelter planning approaches across various jurisdictions: Ottawa, Melbourne, Salt Lake City, Cardiff, Helsinki, and Seattle. Research methods included policy analysis and expert interviews across jurisdictions to contrast and evaluate municipal governments’ strategies and tools of public engagement used when introducing a new shelter. Specifically, our article examines the contexts where opposition is built and how it is mobilized, the actors and types of arguments invoked to oppose homeless housing, and the responses implemented by municipalities, service providers and advocacy groups to build positive relationships between service providers, clients, local stakeholders, and neighbours. We conclude with recommendations for municipalities to engage more effectively with the public, strengthen public dialogue, and encourage solidarity around unhoused residents.

Citations


Key Words: responses to homelessness, participation, emergency shelters

LINKING PUBLIC PERCEPTION AND UNDERSTANDING OF AFFORDABLE HOUSING TO OPPOSITION AT THE LOCAL LEVEL
Abstract ID: 1169
Individual Paper
The National Low Income Housing Coalition, reports that the United States housing gap has now exceeded 7 million homes (NLIHC 2022). Past research suggests that public opposition is a common barrier to the construction of new affordable housing (Tighe 2010; Lee et al. 2022). Some scholars theorize that this opposition is largely driven by a non-representative, more privileged subset of the public (Yoder 2020). Responding to the lack of data pertaining to the broader public’s perceptions of affordable housing, we have conducted a nationally representative survey (N=534) with both open- and close-ended questions. We used hand-coding to analyze the open-ended questions, which yielded insights regarding popular narratives and misconceptions of affordable housing in terms of building types and characteristics, policies to support affordable housing, and the people who benefit from it (Douglas et al., 2023). In this paper, we further probe this data with a mixed-methods approach using both our open-ended qualitative and closed-ended quantitative data to address the following two research questions: 1) How does perception of affordable housing vary by demographic, level of racism, level of trust in the federal government, and affect towards the term affordable housing? and 2) What language used by participants to describe affordable housing is linked to their self-reported support (or lack thereof) for having affordable housing in their neighborhood?

To identify how demographic factors and other measures influence perceptions of affordable housing, we use logistic regression to analyze frequently applied qualitative codes of interest as dependent variables and demographics, symbolic racism score, trust in the federal government, and affect towards the term affordable housing as independent variables. Conditional inference regression trees are also generated to link language used by participants to varying degrees of support for affordable housing at the neighborhood level, where “support” refers to a participant self-reporting acceptance of affordable housing in their neighborhood. Our results indicate that negative affect towards the term affordable housing, is a significant predictor of discussion of subsidies and government departments by respondents when asked the question “When you hear the term affordable housing, what do you think of?”. Furthermore, negative descriptions of affordable housing residents, discussion of unsafe neighborhoods, and mention of government departments are all significantly linked to lower levels of support for affordable housing in one’s neighborhood.

The findings from our statistical analyses, paired with direct quotes from respondents, suggest that opposition to affordable housing is partially driven by a popular, but now antiquated, understanding of the federal government’s role in supporting the creation of new affordable rental units. The failings of many historical public housing projects are undeniable. Lafayette Courts, a public housing project in Baltimore, Maryland, is a prime example, having been demolished to the cheers of locals and former residents. This being said, government responsibility for contemporary affordable housing, notably at the federal level, is being scaled back in favor of low-income housing tax credits (LIHTC), which emphasizes public-private partnerships and places significant responsibility on developers as program drivers (Vale and Freemark 2012). We recommend that planners and advocates work to correct this misinformed “mental model” for the government’s role in the creation of new affordable housing, as they continue their efforts to address opposition to developments in localities across the nation.

Citations

REFUGEE SETTLEMENT IN RAS BEIRUT: DILAPIDATED MODERN BUILDINGS AS SHELTERS

Abstract ID: 1176
Individual Paper

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Refugees are increasingly urbanizing, and their presence in urban contexts resulted in massive transformations that took different shapes across urban neighborhoods. Recent literature explored modalities in which refugee settlement in urban neighborhoods has occurred. Fawaz et. Al (2022) documented three different cases where refugees settled in Lebanese cities. However, cities are not always safe spaces of refuge. Jacobsen documented cases where “Urban refugees” experience discrimination, employment exploitation, and lack of protection (Jacobsen, 2006). This paper seeks to document an unstudied modality of refugee urbanization which is large-scale dilapidated complexes in Ras Beirut. A second angle to approach the urbanization of forced displacement is to locate it within the wider patterns of urban transformations in which they occur, and where they also act as a force on the city. Scholars usually define city transformations as uninterrupted pathways of growth. Murray (2021) investigates Detroit, a city where ongoing decline materializes in dead zones that separate built structures from each other, turning Detroit into a perforated city, and he calls for the recognition of decline as a process that operates in parallel to growth.

The paper explores deteriorated modern complexes in Beirut as a shelter modality that has responded to the growing needs of refugees in the city. The paper seeks to document the organization, inhabitance, and transformation of these complexes over the past decade and to understand it in relation to neighborhood changes. It asks: How does forced population displacement intersect with cycles of building boom and bust? What kind of urban transformations are triggered by these intersections? what types of housing conditions are created? How is this shelter configuration developed in Beirut? How is it managed? How do these spaces contribute to the precarity of their residents? what possibilities do they have to improve/negotiate their settlement? And how do these population and spatial shifts affect the neighborhood at large?

This paper is part of a wider research project at the Beirut Urban Lab that explores the ongoing urban transformations of Beirut, looking at the intersections of capital flows and urban transformations. To study the modality of forced displacement urbanization in Beirut, I mapped 18 buildings in Ras Beirut neighborhood, which house Syrian refugees in precarious conditions. To investigate my case studies, I used mixed methods to collect quantitative and qualitative data. First, I documented tenants’ living conditions and rental arrangements through structured surveys and informal interviews with 140 refugee household, in addition to semi-structured, open-ended interviews with the landlords. Second, I used personal observation to document the physical conditions of the buildings. Finally, I unraveled the history of the buildings and their transformations by interviewing key informants and using archive data from the municipality and land registry.

Looking at Beirut’s cycles of building boom and bust, one can understand how the urban fabric transformed over time leaving pockets of dilapidated yet affordable housing which, albeit under precarious conditions, have allowed for the access of refugees to housing in the city. Ras Beirut’s building stock that we see today in decline was built to support the pre-civil war service sector. The decline of these buildings occurred first through the abrupt interruption of the Lebanese civil-war and extended into its aftermath, as these buildings were neglected, and no new capital flowed into this built environment. Privately held by absentee owners who maintained their hold over
the buildings without inventing a new role, these buildings offered new opportunities for squeezing profit out of tenants in exploitative conditions. As Murray puts it, “Extraction . . . refers to the underlying logics of squeezing value out of diminishing assets, exploitation-through-removal of useful objects” (Murray, 2021: 357).

Citations


Key Words: Refugee Urbanization, Urban Transformations, Urban Decline, Cycles of boom and Bust, Housing Precarity

EFFECT OF MIXED TYPES OF SOCIAL HOUSING ON RESIDENT'S PERCEPTION OF SOCIAL MIX IN SEOUL, KOREA

Abstract ID: 1177
Individual Paper

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Research Question: Residents in social housing may have different perceptions of their neighbors depending on whether their housing is mixed or separate from the general housing, which impacts individual perceptions of social integration. For instance, residents living in social housing that is separate from general housing are more likely to have homogeneous neighbors, whereas those living in mixed housing are more likely to have heterogeneous neighbors. These differences in neighbor composition are expected to affect not only perceptions of their neighbors and their relationship with them, but also their perceptions of society. Therefore, this study aims to examine the impact of mixed social housing and positive relationships with neighbors on residents' perceptions of social mix.

Data and Methods: This study used data on 4,202 residents of social housing from the third wave of the Seoul Public Rental Housing Panel (2019), which is the first panel survey conducted on social housing residents in Korea. The perception of social mix was measured in two dimensions: The perception of class mix and housing mix. An ordinal logistic regression model, Model 1, was applied to measure the perception of Class mix (Class), which refers to an individual's perception of different economic classes living together for social integration. It was measured using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). In Model 2, we employed a multinomial logistic regression model to measure the perception of mixed social housing (Housing), which indicates an individual's preference for mixed social housing through three responses: “Prefer to mix,” “Prefer to Separate,” and “I don’t know.” The explanatory variable, neighbor perception, was composed of four types of variables: Neighbor trust, intimacy, help, and conflict, where a higher score indicated a more positive perception of neighbors, with the exception of neighbor conflict. In addition, the model includes three types of control variables: Variables related to neighbor perceptions, household-level variables, and individual-level variables.

Findings: Before the regression analysis, we divided our sample by housing mix type to compare the descriptive statistics and found that both mixed and separated residents generally expressed support for social class mix. However, regarding the perception of mixed housing, 77.4% of mixed-type residents claimed that mixed housing is necessary, while only 39.8% of separate-type residents supported it. In addition, 38.7% preferred separation, and 21.5% answered that they did not know. According to the regression analysis, it was found that someone living in a
mixed-type was approximately 1.73 times more likely to prefer a higher level of class mix and was more likely to prefer mixed rather than segregated social housing. In addition, regarding neighborhood perceptions, it was found that those that trust their neighbors, feel close to them, and want to help them are more likely to favor class mix and prefer mixed social housing. However, conflicts with neighbors and the existence of neighbors who would help the respondents did not have a significant effect on both perceptions, indicating that positive relationships with neighbors affect social mix perceptions, but negative relationships do not.

Implications: The results of this study suggest that the physical mix of different classes and several classes residing near each other have a positive effect on the perception of social mix. This implies that social housing should be mixed with general housing in Seoul. However, it is more significant to narrow the psychological difference between classes (and neighbors) than it is to narrow the physical distance. This study is expected to provide policy implications for the future supply of social housing and the establishment of social integration planning.

Citations


Key Words: Social Mix, Social Housing, Class mix, Housing mix, Neighbor Relationship

LEAVING GENTRIFICATION BEHIND? THE GEOGRAPHY OF MOVES OUT OF GENTRIFYING AREAS IN THE SAN FRANCISCO BAY AREA

Abstract ID: 1182
Individual Paper

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The link between gentrification and displacement is based on the rapid changes that accompany the increasing shares of college-educated, economically mobile residents. Most definitions of gentrification include rising housing costs as the primary mechanism of displacement. Affordable rental units are replaced with new condominiums, and increased demand translates to higher rents and housing stress.

However, the empirical link to physical displacement is difficult to establish (Easton et al., 2020). Gentrification correlates with higher-than-average out-migration rates under only some circumstances (Ellen & O’Regan, 2011; Lee & Perkins, 2022). While out-migration rates are not significantly different in gentrifying neighborhoods, the destinations where households move to can be (Hwang & Ding, 2020). Without affordable options locally, many cost-burdened residents may move toward the urban edges to find better and cheaper housing options. However, moves over a greater distance can come at the high price of longer commutes, poorer opportunities, and isolation from support networks and community. Households, especially if displaced forcibly through eviction, move locally but end up in a poorer neighborhood or with worse housing (DeLuca et al., 2019).
This paper examines the geography of moves out of gentrifying ZIP Codes in the San Francisco Bay Area. We use tax records from 1994 to 2015 that track households from year to year, where they move from, and where they move to. We first illustrate the difference between gentrifying and non-gentrifying ZIP Codes through a case study of locations that gentrified intensely during the 20 years of the study and areas that initially were similar but did not gentrify. Then, we apply a cross-classified modeling approach to test how responsive households are to the housing context at the point of origin and destination simultaneously.

The case studies emphasize the local nature of moves. Most moves are within the same city. In San Francisco, households leaving gentrifying ZIP Codes move shorter distances than those leaving non-gentrifying areas. The opposite is true in Oakland and San Jose. Among those who move multiple times, up to a quarter return to their ZIP Code of previous residence. The models show that households are more likely to move farther away from high-rent areas, but that rent at the destination has little effect on the distance moved. Distance from a major employment center at the origin significantly reduces the distance all household move. Middle-income movers are most responsive to gentrification and will move longer distances into a gentrifying zip code. The results from the cross-classified analysis and descriptive cases suggest that the lowest-income residents move shorter distances and between a limited number of locations. The combination of relatively short moves among similar zip codes and a high rate of return suggests a conceptual refinement of physical displacement with a more explicit focus on destabilization and housing stress.

Citations


Key Words: Gentrification, Housing affordability, Residential mobility, Displacement

DID YOU MISS THE RIDE? HOUSING BOOM AND HOUSEHOLD WEALTH IN CHINA
Abstract ID: 1199
Individual Paper

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In the two decades following China’s housing privatization, urban housing market rapidly grew into a growth engine of economy, with housing dominating household wealth growth and inequality. The overwhelming belief in government-led home price appreciation made it imperative for nearly all households to strive for homeownership and housing investment despite regulations on housing speculation. Analyzing five waves of national household finance surveys from 2011 to 2019, this study describes the accumulation and distribution of housing wealth among China’s urban households. Applying a framework of household portfolio choice in China’s unique
institutional and cultural contexts to multiyear micro data, this research further explains the formation of private housing wealth among different households through disparate housing wealth paths across birth cohorts and spatial, socioeconomic and social identity polarization. The top winners are the homeowners in coastal superstar cities, well educated, with local urban hukou, born between late 1940s and 1970s, and working in the state sectors. Urban migrant homeowners born after mid-1980s are the most indebted and more financially fragile in a housing bust.

Citations


Key Words: housing boom, wealth, urban household, China

EXPLORING THE CHALLENGES OF EMPLOYER-PROVIDED MIGRANT LABOR HOUSING IN MICHIGAN: AN ETHNOGRAPHIC STUDY
Abstract ID: 1203
Individual Paper

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In recent decades, there has been a shift in the migratory patterns of farmworking communities and many have become more settled. This means that fewer farmworkers are migrating between seasonal crop sites and working closer to a home base. This, in combination with lower immigration from Latin America means that the flow of new immigrant workers has declined and resulted in an aging workforce. And often this has further resulted in an increased need for year-round affordable housing in their communities.

Nationwide, most farmworkers find their housing in the private market. However, historically, a majority of farmworkers had their housing provided by their employers. While units provided by employers have declined, some still operate formal camps for their laborers. In the United States, approximately 10-15 percent of farmworker housing remains employer owned and in Michigan a substantial portion of the farmworker population still depends on this type of housing.

Farmworker housing needs require special attention due to limited resources which are often the result of their seasonal, migratory, and often unstable employment. Farmworkers also have difficulties accessing the housing services bureaucracy due to language barriers, immigration status, fear of deportation, and migratory labor patterns. Housing conditions in the community can vary based on the state or residence, citizenship status, number of family members, and whether they reside in an urban or rural area.

While Federal and state regulations for employer operated farmworker housing exist, they are insufficient in addressing the housing needs of the community. Current regulations do not adequately address or mitigate issues related to sanitation, overcrowding, structural deficiencies, and pesticide exposure and enforcement is weak with a lack of accountability for employers. Regardless, this shortage of safe and affordable housing for migrant farmworkers has prompted the Michigan Department of Agriculture and Rural Development (MDARD) to appoint a new Migrant Labor Housing Advisory Board, a board which had been dormant for decades.
Housing that is provided by employers conflates the employer and landlord relationship which can create an impediment to seeking remediation of substandard housing conditions. This study seeks to examine ethnographically how Latinx farmworkers in employer provided migrant labor housing in western Michigan and their families experience and navigate the housing services bureaucracy and how they navigate the conflict that is created when the landlord/tenant relationship becomes enmeshed with the employer/employee relationship. Further, the study explores whether the State, which is responsible for licensing migrant labor housing, ensures that it is decent, safe, and sanitary.

Citations


Key Words: Farmworker Housing, Latinx Housing, Workforce Housing, Substandard Housing

BARRIERS TO HOUSING PRODUCTION IN OREGON: LEARNING FROM DIFFERENT STAKEHOLDERS

Abstract ID: 1215
Individual Paper

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National reports from the Urban Institute, Harvard’s Joint Center on Housing Studies, and Up For Growth point to a housing crisis – cost burden is rising and housing supply is not keeping up with demand. (Urban Institute, 2017; Harvard Joint Center on Housing Studies, 2018; Up For Growth, 2018) The lack of housing supply and affordability is an issue facing urban and rural areas alike. In this study, we sought to understand the perspectives of multiple stakeholders about the barriers to housing production in Oregon. We sought to understand 1) barriers described in academic, industry, and government literature on housing supply; and 2) whether differences exist in the perceptions of barriers to new housing production among planners, for-profit housing developers, and nonprofit housing developers.

Our methods include literature review, policy review, and survey analysis. In 2022, we administered a survey on perceptions of housing barriers to planners. The survey targeted (1) local government staff (primarily planners, but other staff in cities that do not have planning staff), (2) for-profit housing developers, and (3) non-profit housing developers. The survey analyzed 65 potential barriers grouped into five categories: (1) land supply factors; (2) construction cost factors; (3) industry structure; (4) demand factors; and (5) process factors. A total of 323 individuals participated in the survey; 134 government representatives (41% of respondents), 105 private sector developers (33%), 52 nonprofit housing developers (16%) and 32 that could not be categorized in the three primary groups (10%). We use chi-square tests to determine if perceptions of barriers varied by respondent pool (e.g., public sector, private sector developers, and non-profit developers).

What was clear from our research is that there is no single barrier or combination of barriers that can be generalized nationally, statewide, or in Oregon communities. Moreover, barriers interact in ways that are complex
and required detailed local analysis to fully understand. The results show strong agreement among the three groups on barriers rated most extreme with several barriers related to construction costs (construction and materials), industry structure, and land supply constituting the most consistently rated extreme barriers. Additionally, the limited ability of low- and moderate-income households to compete in the market due a mismatch in supply and demand and the failure of the housing supply to keep up with population growth are demand-related barriers that are perceived as extreme.

Notably, the biggest area of disagreement between planners and developers was on process factors. All of the process-related factors showed statistically significant differences between sample populations (e.g., public sector, private sector, nonprofit). Between 3% and 16% of public sector respondents indicated the process-related factors were extreme barriers. Private sector and nonprofit developers perceived process-related factors to be extreme barriers much more frequently than public sector. The largest differences were in (1) length of time to process land use entitlements (15% public sector compared to 82% private sector and 70% nonprofit), (2) length of time it takes to process permits (5% public sector compared to 66% private sector and 64% nonprofit), (3) cost of SDCs (11% public sector compared to 75% of private sector and 35% nonprofit), and (4) permit fees (3% of public sector compared to 59% private sector and 37% nonprofits).

Citations


Key Words: housing underproduction, housing affordability, land use policy

CLOUDY TITLES AND INVOLUNTARY BLACK LAND LOSS: EVIDENCE FROM ARCHIVAL AND LONGITUDINAL ANALYSIS IN MEMPHIS, TN

Abstract ID: 1230
Individual Paper

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A growing body of research explores the racialized phenomenon of heirs’ properties, land passed from one generation to the next without a will or estate plan. Scholars point to racial discrimination in the legal system—including court-sanctioned partition and tax sales of heirs’ properties, as well as barriers to estate planning—to call for reparations for Black communities subjected to involuntary heirs’ land loss. Despite theoretical consensus on the vulnerability of heirs’ properties, empirical evidence shedding light on the presence and impact of heirs’ properties is scarce. No longitudinal study has demonstrated their effect on dispossession, and the scale and spatialization of U.S. heirs’ properties remains unknown, despite recent efforts to build a GIS methodology to identify heirs’ homes. And while cloudy titles have been characterized as a rural phenomenon that disproportionately impacts Black farmers, scholars have questioned this conception and called for greater attention to urban heirs’ properties. This research charts the dispossession of urban heirs’ homes over time through archival research in the first neighborhood built for Black homeowners in Memphis, Tennessee, complemented by contextual, city-wide longitudinal analysis of heirs’ properties. I work with students at the University of Memphis Law School Neighborhood Preservation Clinic and legal service providers at a local community development corporation to collaboratively catalog instances of heirship across records from the local Registry of Deeds dating back to 1912. Through our archival analysis of approximately 1,800 public records, the research asks: what are the indicators and characteristics of urban heirs’ properties? And, with longitudinal, event history analysis across city-wide indicators of heirship: what forms of dispossession are heirs’ properties most vulnerable to, and when are their homeowners most at risk of being dispossessed of generational housing assets?
We conduct archival research across a random subset of properties from the neighborhood (n=303) as well as across a non-random street of interest to the local community development corporation (n=56). We catalog the different indicators of heirship present across public records, and find an Affidavit of Heirship on file in local Registry of Deeds data is a particularly reliable and ubiquitous, historical indicator of heirs’ properties. Archival findings further substantiate the challenges of identifying all heirs’ properties in the U.S., but demonstrate how these Affidavits of Heirship might be incorporated within recently-proposed, County-level methods of identifying heirs’ homes to understand the presence of heirs’ properties overtime. Relying on this indicator for city-wide analysis, I use logistic models to understand the characteristics of all properties that have an Affidavit of Heirship on file across Memphis, seeking to understand how they are assessed, appraised, and susceptible to market and tax foreclosures. Then, with event-history analysis, I seek to understand the effect of properties transferred with Affidavits of Heirship on generational land dispossession, examining the forms of dispossession heirs’ homeowners experience, and when they are most at risk of dispossession. Findings from the longitudinal analysis have implications for where policymakers might best intervene to protect heirs’ homeowners and retain generational Black housing assets, and how the Uniform Partition of Heirs’ Property Act (UPHPA) might be amended to include protections for urban heirs’ homeowners.

Citations


Key Words: heirship, reparations, longitudinal analysis, cloudy titles

POST-DISASTER RECOVERY TRAJECTORIES OF MOBILE HOME PARKS: A CASE STUDY OF PANAMA CITY MSA AFTER HURRICANE MICHAEL

Abstract ID: 1235
Individual Paper

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Manufactured homes, particularly those sited within mobile home parks (MHPs), provide a critical source of affordable housing, often for marginalized populations (Durst and Sullivan, 2019). However, manufactured housing is also common in hurricane-prone regions. A legacy of planning policies has resulted in MHPs being located on non-residential and inferior land (Sullivan 2018, Mandekar 2016). A growing body of scholarship demonstrates that MHPs are located in areas exposed to environmental hazards (Sullivan et al., 2022) and that local land use
regulations treat MHPs differently than traditional single family housing, adding barriers to their development or redevelopment after disaster (Rumbach et al., 2020). Due to the tenure arrangements in which MHP owners rent out parcels of land to tenants who own their homes but not the land below, residents are doubly vulnerable to displacement if their home and the park is damaged. Not only do residents need to repair damages to their own units, residents are dependent on the recovery of the park and its infrastructure on which their homes are located. Planning for equity in this important component of the US affordable housing stock will require a better understanding of the factors that contribute to positive and negative post-disaster outcomes. This research is intended to investigate factors that influence the likelihood of a successful recovery for a mobile home park post-disaster.

Post-disaster recovery is dependent on the extent of damage and the availability of resources, a process that has been well documented. However, the influence of land use policy on the ability to rebuild is less studied, particularly in the unique land tenure arrangement of mobile home parks. Florida is a critical site for researching the relationship between land use controls and recovery in MHPs due to its robust framework for land use planning, and the prevalence of both manufactured housing and hurricane risk. Despite more recent legislation reducing state authority over local planning, Florida remains one of the few states with state mandated local planning and growth management policies. In 2018, Hurricane Michael made landfall in Bay County, Florida as the fourth strongest hurricane to hit the United States, causing extensive damage throughout the Panama City Metropolitan Statistical Area (MSA), and this serves as the case for this analysis.

The Panama City MSA consists of Bay and Gulf counties and includes nine municipalities. After identifying and creating a database of MHP parcels in the study area, we utilized county level inspection reports to estimate MHP recovery 6-9 months after the event. We investigate potential contributions to recovery through three main potential influences: hazard exposure, ownership structure, and land use regulation. Parcel-level wind and flood data from the storm provides measures for hazard exposure. Ownership structure (small owners vs corporate owners) serves as a proxy for measuring the potential resources a park owner may have available for park repairs. Municipal and county level land use regulations specific to MHPs were surveyed to codify planning tolerance for MHPs and to understand policies or processes which might hinder or promote recovery. Additionally, existing and future land uses other than for MHPs, may put additional pressure on park owners to close and allow development of another use.

Findings contribute to limited research on MHPs, particularly in the wake of disaster and may inform land use policies supporting recovery processes for MHPs. This study reveals how planning regulations influence risk to socially vulnerable individuals and an already limited affordable housing stock. This issue is particularly salient in planning discourses around both affordable housing and climate adaptation, particularly in hazard prone areas with significant stocks of manufactured homes.

Citations

  https://doi.org/10.1061/(ASCE)NH.1527-6996.0000357

Key Words: Mobile home parks, affordable housing, disaster recovery, land use regulation, manufactured housing
Climate adaptation planning is still in search of new practices which can adequately address histories of racial segregation and inequality in cities. (Rudge 2021) However, communities of color, on the frontlines of the climate crisis, are broadening and redefining climate adaptation by tying grassroots and bottom-up planning efforts to housing and racial justice. (Nelson et al. 2022) The work of Black grassroots organizations in Edgemere, a neighborhood in Queens, New York City, offers an instructive case of the new models of collective land ownership and forms of governance that are being envisioned in these adaptation planning efforts.

Housing recovery programs in New York City, such as Build it Back, created in the aftermath of Superstorm Sandy, are not well suited to meet the needs of low-income communities of color on the frontlines of the climate crisis in U.S. cities. Guided by federal policy, namely the Uniform Relocation Assistance and Real Property Acquisition Act, these programs privilege single family homeowners largely excluding Black and Latino renters who reside in the city’s floodplains and waterfront areas. (Kevin Loughran & James R. Elliott, 2022)

As a consequence, the city’s interventions in these communities, to rebuild homes and relocate residents to lower risk areas, have produced uneven results. An important case study, the Resilient Edgemere Plan in the Rockaway Peninsula produced a fragmented landscape and in some cases displacement. Instead of a cohesive relocation process, the application of a uniform policy approach to a community with complex and varying systems of land tenure and building typologies has left open vacancies and a general sense of uncertainty among residents who choose to stay.

In the absence of effective state assistance, residents in Edgemere have begun to counter-plan and formulate community-based strategies which emphasize collective ownership over public land. These strategies aim to meet housing needs and promote alternative, more climate resilient land-uses, such as community gardens in publicly-owned vacant land. The main form this counter-planning has taken place is in the building of a community land trust vision to promote housing stability and community resilience.

This project, through a participatory action research approach, studied the community-based adaptation model residents are creating in Edgemere. The research team partnered with local community organizers to organize a series of workshops designed to better understand how residents experience housing inequality and instability within the city’s Resilient Edgemere Plan. It aimed to better understand the governance structures and housing strategies created through these community-led efforts. And, how these strategies aim to promote housing stability and climate adaptation through specific building typologies and land tenure arrangements. The research was guided by the following questions:

1. What governance structures are communities of color creating through the formation of a collective approach to climate adaptation and housing stability in Edgemere?

2. How does a collective ownership model balance market constraints and access to climate resilient, affordable housing for low-income residents?
Citations


Key Words: Climate adaptation, Housing inequality, Racial justice

PERSISTENTLY INCOME-DIVERSE NEIGHBORHOODS AND THE ROLE OF PLANNING AND HOUSING POLICY: A COMPARATIVE CASE STUDY
Abstract ID: 1252
Individual Paper

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Mixed-income neighborhoods have long been proposed as a planning ideal that contrasts with the racial and economic segregation that characterizes much of metropolitan United States. However, scholars of neighborhood change have theorized and empirically shown that, while poor and affluent neighborhoods tend to persist, mixed-income neighborhoods tend to transition into either low- or high-income neighborhoods, exiting their status as mixed-income. However, neighborhoods that have maintained a high level of income diversity do exist in the U.S. This paper builds on a prior paper documenting the temporal trends and spatial patterns of neighborhood income diversity in the metropolitan U.S. and addresses the following research questions: i) What are the characteristics of persistently mixed-income neighborhoods?; and ii) how have persistently mixed-income neighborhoods maintained their income diversity over time, and what is the role of planning and housing policy?

Employing an embedded two-case study design (Yin, 2014), this paper focuses on Philadelphia, PA, and San Francisco, CA, as the two study sites for exploring the phenomenon of persistently mixed-income neighborhoods. The paper interrogates the various theorized drivers of income diversity at the neighborhood scale--from historical and current housing and planning policy at the city level, to housing stock and market dynamics at the neighborhood level--through the triangulation of multiple types of data. Specifically, the paper relies on the analysis of historical and current city plans and zoning, as well as in-depth semi-structured interviews with city planning departments, community development organizations, and real estate and policy professionals in each city. Against the study’s null hypothesis that the observed persistent income diversity in neighborhoods is a chance occurrence, the case study’s expected findings include both converging and diverging narratives between San Francisco and Philadelphia--some core similarities surrounding policy objectives and programs and other differences shaped by dissimilar planning and market contexts. The paper seeks to provide theoretical and empirical insights into neighborhood change, income mix, and the various policies that influence both, with implications for planning practice.

Citations

MAPPING THE DISASTER DIASPORA: USING CONSUMER DATABASES TO UNDERSTAND POPULATION RELOCATIONS IN RURAL NORTHERN CALIFORNIA
Abstract ID: 1263
Individual Paper

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This paper summarizes ongoing work using household-level consumer databases to better understand population relocations away from disaster areas in the wake of major fires, floods, and mudflow events in California, with a focus on 2018’s Camp Fire. While such proprietary data comes with limitations (and often costs), it can also be an invaluable tool in understanding relocation decision-making and recovery in affected areas, as well as understanding longer-term patterns potentially associated with changing hazard awareness. In addition to mapping address-to-address relocations away from the fire perimeter, this presentation also builds on initial efforts to understand the Camp Fire ‘diaspora’ by examining the socioeconomic and risk characteristics of the places these disaster survivors are now calling home.

Citations


DELIVERING AFFORDABLE HOUSING THROUGH PUBLIC-PRIVATE PARTNERSHIPS: LESSONS FROM TORONTO’S HOUSING NOW PROGRAM
Abstract ID: 1283
Individual Paper

EVANS, Allison [University of California Berkeley] allison.r.evans@gmail.com, presenting author

This article analyzes the City of Toronto’s Housing Now program, designed to address affordability concerns through public-private partnerships. The program was adopted in 2019 as part of the larger municipal housing plan administered by the city’s real estate division, aimed at creating around 11,000 ownership and rental units near high-level transit and other amenities. Housing Now sites are developed through private and non-profit partnerships on surplus land owned by the city to reduce development costs and create more affordable units.

Despite the program’s stated progressive goals, a local volunteer advocacy group is working to produce development schemes for the same city-owned sites with higher amounts of affordable units and often posts findings on social media. The group, comprised of planners, architects, and other urbanists, also reviews the relevant policies and recommends changes to the city’s development proposals, zoning bylaws, and built-form guidelines.
The research is motivated by the limited assessments available for the Housing Now program and to better understand the critiques put forward by housing advocacy groups. The questions guiding this research are: what tensions exist between the Housing Now proposals and the HousingNowTO counterproposals? What do the tensions reveal about the implications of relying on debt/equity financing for Housing Now? About the city’s zoning and built-form guidelines? How effective is the Housing Now program at delivering affordable housing units compared to the counterproposals? How many units has Housing Now delivered, and what level of affordability do the Housing Now units meet? In addition, the locations will be considered to assess how the developments are spatially dispersed across the city and what these locations might reveal accessibility or income-based socio-spatial segregation.

Using qualitative methods and the Housing Now policy as a case study, the research will provide a detailed account of the program since its inception primarily through document analysis, including any related policies, internal publications and press releases, newspaper articles and other relevant written sources. Alongside the policy analysis, the research will also compare the counterproposals created by HousingNowTO to the city's plans for the sites, including analysis of any relevant media and written material produced by the group. Mapping will also be used where necessary, for instance, to spatially analyze and describe Housing Now development sites across the city.

Overall, the research aims to measure the program’s potential to deliver affordable housing as an example for other North American cities faced with affordable housing shortages.

Citations


Key Words: affordable housing, public-private partnerships, housing policy, urban development, segregation

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THE ROLE OF RACIAL CODE WORDS IN NIMBY OPPOSITION TO DIVERSIFYING LOCAL HOUSING MARKETS IN ARIZONA AND IMPLICATIONS FOR FAIR HOUSING LAW

Abstract ID: 250
Research in Motion (RiM)

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Not-in-my-backyard (NIMBY) opposition is a major barrier to improving the affordability and diversity of U.S. local housing markets. Our research focuses on an underexplored dimension of NIMBYism—use of racial code words in expressing and justifying opposition. Racial code words are indirect signifiers of racial or ethnic groups that contain...
positive or negative value judgements and contextually implied or salient meanings, e.g., White neighbors at a
public meeting referring to Black and Latino men as “criminals”. Coded language is a powerful tool, because its
“plausible deniability” enables users to act in ways that perpetuate their power and privilege while often avoiding
accusations of racism and punishment by fair housing law.

Our research develops theory on the forms, functions, and mechanisms of racial code words in the housing equity
context. We examine the use of racial code words in media and public meeting discourse to oppose projects, plans,
and policies related to diversifying local housing costs, types, and tenures from 2012 to 2023 in a sample of towns
in rural counties and cities in urban counties in Arizona. We identify racial code words and their contextual
elements in public discourse using qualitative content and discourse analysis. We analyze the forms, functions, and
mechanisms of code words using thematic analysis and a combinatory deductive and inductive approach. In this
process, we draw on themes from our prior research (like othering tropes for criminality and contagion and use of
linguistic techniques like euphemism and metonymy to achieve plausible deniability) and refine and discover new
themes. Finally, we explore differences in the forms, functions, and mechanisms of code words across geographic,
housing transactional, and communicative settings using qualitative pattern matching and quantitative descriptive
statistical analysis.

Overall, this research offers preliminary insights into the use of racial code words to hinder housing affordability
and equity. More specifically, our findings help advance investigations on how machineries of racial code words
function to restrict local housing markets from becoming more inclusive across distinct contexts. Lastly, we critique
fair housing law in light of our findings.

Citations


Key Words: housing, race, law, NIMBY, discourse

STABLE OR UNSTABLE MOVING OUT? A LONGITUDINAL ANALYSIS OF YOUNG ADULTS IN SOUTH KOREA

Abstract ID: 360
Research in Motion (RIM)

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Due to widespread neoliberal policies across the world, it is increasingly challenging for young adults to achieve
stable employment and housing, both of which are crucial for the stability of their lives. Insecure employment may
exacerbate young adults’ housing problems (Beer et al., 2016), which may cause or perpetuate insecure
employment again (Desmond & Gershenson, 2016). A growing number of young adults remain as renters instead
of homeowners, viewed as climbing a conventional housing ladder, which is often called generation rent (McKee,
2012). In these circumstances, some young adults may decide to (or are forced to) give up their residential
independence and continue to live with their parents (Jacob & Kleinert, 2008). However, some may involuntarily
leave their parental home and become residentially independent without being fully prepared for stable housing.
Although this unprepared housing autonomy may be a main source of heightened risks of housing instability in private housing markets and of generating associated inequalities, little is known about conditions for different types of moving out from parental homes.

To fill the research gap, we examined the varying conditions for stable and unstable moving out in South Korea (Korea). We take Korea as a case study, which is characterized by unaffordable housing markets for young adults and severe economic imbalances between capital and non-capital regions. Based on the transition model of Cordón (1997), we define stable and unstable moving out as follows: (1) if the employment status of the youth at the time of moving out is a full-time worker or stable self-employed, and (2) if the employment status of the youth at the time of moving out is a temporary worker, unstable self-employed, or unemployed/economically inactive. We, then, examine the following research questions: (1) under what conditions do young adults experience (un)stable moving out? (2) to what extent does parental background explain the likelihood that young adults move out stably (or unstably)? (3) to what extent does the likelihood of experiencing (un)stable moving out vary between regions?

We, then, examined the following research questions: (1) under what conditions do young adults experience (un)stable moving out? (2) to what extent does parental background explain the likelihood that young adults move out stably (or unstably)? (3) to what extent does the likelihood of experiencing (un)stable moving out vary between regions?

We analyzed the Korea Welfare Panel Study (KoWePS) data that track 2,603 young adults between 2007 and 2020. We measure the incidents of stable and unstable moving out. Then, we examine the associations of those two types of moving out with economic and sociodemographic (e.g., gender, age, marital status, and income), housing-related (e.g., housing affordability, housing tenure), parental background (e.g., income, employment status), and location of residence factors. For panel analysis, we incorporated the random-effects complementary log-log modeling approach.

This study reveals that female and high-income young adults are likely to experience unstable moving out compared with their counterparts. Moreover, the higher the parental income, the higher the probability of unstable moving out. However, parental employment status indicated nuanced results. If parental employment is stable, young adults are likely to move out stably, whereas the likelihood of unstably moving out is high when parental employment is unstable. We also confirm significant differences in the likelihoods of experiencing unstable moving out between regions. Specifically, young adults living in non-Capital regions are likely to experience unstable moving out.

This study works as a stepping stone to understanding the conditions for unstable moving out, which may play an important starting point for unstable housing trajectories and housing inequalities. This study is the first to examine one growing but largely overlooked phenomenon, unstably moving out. This study contributes to expanding the knowledge about household formation mechanisms of the young generation.

Citations


Key Words: moving out, young adults, parental background, geographical variation, longitudinal analysis
Despite rising concern about the shortage of affordable rental housing for low-income households in the United States, few studies have examined neighborhoods in which the number of affordable rental units is larger than the number of low-income households that can afford those units, as I refer to affordable housing surpluses (Bogdon & Can, 1997). Such potential affordable housing surpluses may exist due to the multidimensionality of neighborhood contexts for low-income households. Previous studies have identified various tradeoffs between dwelling space, neighborhood opportunity, housing affordability, transportation costs, racial discrimination and preferences (Acevedo-Garcia et al., 2016; Blumenberg et al., 2015). Given this understanding, first, we investigate the characteristics of neighborhoods in which rental units affordable to low-income renters remain. We consider whether those neighborhoods are significantly associated with (1) two definitions of location affordability: housing-cost burden and transportation-cost burden; (2) three definitions of neighborhood opportunity; socioeconomic opportunity, educational opportunity, and health/environmental opportunity; and (3) racial composition of neighborhoods. Second, we examine potential structural metropolitan factors that contribute to neighborhood-level affordable housing surpluses. In this study, we examine whether certain metropolitan-level characteristics are significantly associated with the neighborhood-level surpluses; and whether certain combinations of neighborhood- and metropolitan-level characteristics that influence the neighborhood-level surpluses exist.

To examine the research questions above, we first measure neighborhood-level housing affordability surpluses by analyzing the 2013-2017 Comprehensive Housing Affordability Strategy (CHAS) data based on the largest 100 core-based statistical areas (CBSAs). On the demand side, we measured the numbers of three income groups at a census tract level: (1) extremely low-income (ELI) renters, (2) very low-income (VLI) renters, and (3) low-income (LI) renters. On the supply side, we categorized rental units into three groups: (1) affordable rentals for ELI households, (2) affordable rentals for VLI households, and (3) affordable rentals for LI households. Based on the estimated numbers, we calculated neighborhood-level affordable housing surpluses.

To measure the multidimensionality of neighborhoods, we developed a unique dataset based on multiple data sources, including Child Opportunity Index (COI) 2.0, the Location Affordability Index 3.0, and American Community Survey (ACS). We also include a set of CBSA-level variables using the Census Transportation Planning Package (CTPP), Wharton residential land use regulatory database, and ACS. We estimate a series of two-level hierarchical linear (or logistic) regression models of neighborhoods nested with CBSAs to explain the number (or the presence) of neighborhood-level affordable housing surpluses.

The results indicate that rental units affordable to ELI households entail high transportation costs and less access to education opportunities. Moreover, neighborhoods tend to have more Black and Hispanic populations, and the surpluses are less likely to exist. At the CBSA level, the share of car commuters as a proxy of the overall degree of car dependency is negatively associated with the surpluses. We confirmed that in highly car-dependent CBSAs, (more) affordable housing surpluses are likely to be located in neighborhoods that entail high expected transportation costs. For VLI households, affordable options tend to be located in neighborhoods with fewer socioeconomic, health and environment, and education opportunities. The degree of segregation between White and Black at a CBSA level is significantly associated with affordable housing surpluses. Affordable housing surpluses for LI households are likely to exist in racial minority neighborhoods with low access to opportunities. For LI households, expected transportation costs are not significantly associated with the presence of affordable housing surpluses. Moreover, in strict regulatory CBSA environments, the surpluses are less likely to exist. This study provides evidence supporting that low-income renter households face multiple barriers to accessing neighborhoods with affordable rental surpluses in terms of opportunity, transportation costs, and race
In the United States, public housing provides deeply affordable and stable housing for nearly one million low-income households. Yet federal administrations across the political aisle have chronically disinvested in its success, leaving residents in increasingly deteriorating living conditions (Bloom et al., 2015). In recent decades, the US Department of Housing and Urban Development (HUD) has proposed multiple programs to transform historically publicly operated housing to public-private models. The latest of such initiatives is called the Rental Assistance Demonstration (RAD).

RAD is an Obama-era public housing redevelopment program administered by HUD. Though there are a few different models of RAD, it largely transitions traditional public housing to a project-based rental assistance/voucher model. Public housing authorities (PHAs) pair up with investors who can leverage debt for repairs they otherwise could not while also potentially outsourcing the management and/or operation of such projects to non-public entities. Since 2012, RAD has converted about 185,000 units of traditional public housing nationwide while asserting protections for existing residents, including a one-for-one replacement of units and a right to return to their property if it undergoes substantial redevelopment (Bossie & Joice, 2021).

On one hand, RAD is providing much-needed repairs to public housing properties facing decades of investment backlog while purportedly keeping resident protections in place. On the other, it is introducing private actors with profit-oriented motivations to what was previously a purely public asset with little oversight. Importantly, implementation of RAD varies quite widely. In some instances, PHAs are using RAD as a tool for innovating partnerships in public housing preservation and expansion (Metcalf et al., 2023; Schindler & Moyer, 2022). Elsewhere, there are reported concerns of RAD introducing private ‘slumlords’ as managers and increasing the number of evictions from public housing (Kamat, 2019). To date, planning scholars have yet to examine RAD critically and holistically. There is particularly a need to consider equity in implementation, namely, RAD’s potentially disparate approaches from housing authorities and the program’s impacts on existing residents.

In this research project, we address this gap in the literature by creating a typology of how PHAs across the United States are implementing RAD in different ways. We also pay particular attention to equity concerns by examining
which types of residents are being impacted by the program, as well as how they are experiencing the conversions. In the first phase of this project, we ask the following research questions:

1. With an understanding for diverging context and capacity, how are PHAs across the US implementing RAD differently?

2. What are the socioeconomic and demographic differences between families living in what remains as traditional public housing versus those living in projects eventually converted through RAD?

To address these questions, we are employing a sequential mixed-methods study. We are currently creating an original database drawing on public datasets from HUD, the National Housing Preservation Database, and the Eviction Lab. The database allows us to examine RAD’s investment figures, uptake of Low-Income Housing Tax Credits, socioeconomic/demographic data about impacted v. non impacted residents, PHA level capacity (including eviction filings), and the types of owners and managers of a sample of RAD projects (public, non-profit, private, profit-motivated). The database will result in descriptions and maps that provide a holistic view of how and where RAD is being implemented, resulting in the first-known descriptive typology on its impacts. We will also use the database to select case studies for qualitative evaluation in the second phase of the project. Early results suggest that location and capacity of local PHAs are critical to instances where RAD is successful.

Citations


Key Words: public housing, redevelopment, Rental Assistance Demonstration (RAD), implementation

BUILDING BACK BETTER: DOES POST-DISASTER RECONSTRUCTION INCREASE RESILIENCE?

Abstract ID: 790
Research in Motion (RiM)

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Floods are an increasingly common natural hazard in the United States, posing a significant risk to both people and property. In any given year, flooding kills more people than any other single weather hazard and imposes the highest economic cost of any natural hazard. Contributing factors to the growing frequency and severity of floods include climate change, land use changes, and increasing development in flood-prone areas. As a result of these factors, the Federal Emergency Management Agency (FEMA) estimates that 8.7 million properties are within the 100-year floodplain, although this is acknowledged to be a vast underestimation of the risk. However, not all properties within the floodplains are equally vulnerable. This paper aims to investigate whether homes rebuilt in the aftermath of major flood events are more resilient than pre-disaster construction, with consideration for presence within the federally defined floodplain.
This analysis uses Hurricane Harvey’s impact on Harris County, TX, as a case study. In August 2017, Hurricane Harvey made landfall in the Gulf Coast. Due to the storm and related flooding, over 300,000 homes were damaged or destroyed, including more than 200,000 homes located in the Houston area. In Houston, most of the damaged homes were outside of the federally defined 100-year floodplain. I will analyze how the resilience of development changed after Hurricane Harvey, and whether presence within the federally defined 100-year floodplain influenced the resilience of new-development, with consideration for the effect of contemporaneous building codes.

For this analysis, I will use publicly available building data from the Harris Central Appraisal District. This data provides annual information on residential building value, size, quality, and foundation type, among other variables. Pre-disaster housing conditions will be compared to post-disaster housing conditions for properties that underwent major renovations or new construction in the three years following Hurricane Harvey. Additionally, a random sample of fifty rebuilt or renovated homes will be selected for an architectural review of flood mitigation measures, both within and outside of the floodplain. The results will be analyzed in the context of local building regulations and federal requirements.

Preliminary results show that rebuilt homes had indications of increased quality and resilience, particularly in the floodplains which had stricter building regulations. However, worsening climatic conditions will likely render these improvements insufficient for preventing future flooding. Furthermore, the rebuilding process has reduced the number of naturally occurring affordable housing (NOAH) in Houston. This finding highlights the impact of hurricanes on NOAH when the rebuilding process leads to the larger and more expensive new construction. This demonstrates how the storm exacerbated the already existing shortage of affordable housing.

The analysis also emphasizes the need for increased oversight and regulation of the construction recovery process in the aftermath of major flooding events. The presentation will conclude with a discussion of potential policy solutions and recommendations for future research. I hope that the findings of this study will inform post-disaster recovery, and provide recommendations for improvements to building codes and land use plans to mitigate the impact of natural disasters on vulnerable communities.

Citations


Key Words: Disaster recovery, Natural Hazards, Flood Mitigation, Post-disaster reconstruction, Climate Change

NON-LINEAR AND WEAKLY MONOTONIC RELATIONSHIP BETWEEN SCHOOL QUALITY AND HOUSE PRICES

Abstract ID: 851

Research in Motion (RIM)

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Central theme or planning issue: Many countries have adopted an attendance-area-based approach to school education. Under this approach, households must send children to designated neighborhood public schools for free education. As a result, school quality becomes a significant determinant of households’ location choice, leading to the capitalization of school quality on house prices and rents because households try to outbid each other to locate in areas with high-quality schools. Since higher-income households can outbid lower-income ones, this approach can lead to the concentration of the former in areas with good schools. Such household sorting could lead to educational, economic, and social inequities when left to market forces because high house prices or rents restrict children from lower-income households from accessing high-quality education. Furthermore, empirical studies have shown strong linkages between the measures of education quality and earning potential; therefore, such a household sorting could worsen economic disparities between the rich and the poor. Finally, to the extent race/ethnicity and income might be highly correlated in a region, such sorting would likely concentrate minority communities in areas with low-quality schools.

These inequities-related concerns have spawned a large body of empirical studies. While US-focused initially, the more recent studies are from other parts of the world, mainly China, as regions in that country have started employing an attendance-area-based approach for admissions into public schools.

Given the inequities’ spatial nature and the fact that they are tied to the land, planning interventions might be required. Such interventions could include up-zoning in areas with high-quality schools. Indeed, empirical studies show that an inelastic housing supply increases school quality’s house price premiums. Furthermore, targeted government subsidies might be needed to develop affordable housing for low-income households in areas with high-quality schools. Finally, planners might need to address opposition from high-income property owners in such areas since they are likely to resist up-zoning and the provision of affordable housing in their neighborhoods. However, the first step is to identify the school-quality-related house price premium.

Approach and methodology: Most empirical studies that estimate school quality’s impact on house prices assume a linear relationship between the two. Furthermore, the few studies that account for non-linearity still assume a strong monotonic relationship, meaning that as school quality increases, so do house prices. I advance this line of research by using Fremont, California, as the study area to explore the possibility of a non-linear and weakly monotonic relationship between school quality and house prices. For example, such a relationship might exist if house prices or rents do not increase if school quality increases from low to medium quality.

Specifically, I employ spatial econometric models to answer the following research questions: a) Controlling for other factors, do the school quality and house prices have a weak monotonic relationship? b) Is the school quality’s house price premium influenced by the interaction between the quality of different schools (elementary, middle, and high)?

Findings and relevance of work: This study provides evidence for a non-linear and weakly monotonic relationship between school quality and house prices. The regression analysis shows that homeowners are unwilling to pay a premium for an increase in school quality from low to medium. However, they are willing to pay a significant premium when all schools are top-quality and for access to nationally-renowned schools, in addition to the premium for top-quality schools. These findings have important planning implications because they provide new insights into the homeowner’s residential location choice and highlight the need to consider school quality in urban and regional plans.

Citations


Key Words: School Quality, Household Sorting, Housing Policy, House prices, Spatial Econometrics

SOCIAL HOUSING IN A SETTLER COLONIAL CAPITALIST CONTEXT
Abstract ID: 961
Research in Motion (RiM)

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Social housing is housing that has been removed from the market to maintain affordability, is provided collectively through community-based organizations and government programs, and is funded collectively through taxes and government spending. It is intended to ensure housing security for households that cannot afford good quality housing in the market. However, it is also enmeshed in settler colonial and capitalist policies and systems, including how land and property are perceived and managed by the state, and the global financialization of housing. These hegemonic policies and systems enable an ongoing extraction of wealth from Indigenous lands through racialized capitalist processes, creating distinct forms of housing need for Indigenous people (Thistle 2017; Christensen 2017). This paper examines social housing in Canada to ask, “what is the relationship between social housing and settler colonial capitalism? What are the implications for addressing housing need?”

To answer these questions, I will delve into the recent scholarly literature on settler colonialism, racial capitalism and decolonization (Tuck and Yang 2012; Dorries et al. 2019; Coulthard 2014). I will also conduct an analysis of the gray literature as well as interviews with housing providers in British Columbia, Manitoba, and New Brunswick to identify and assess definitions of, and solutions to, housing need. This will allow me to examine how social housing policy is intertwined with Canada’s history and present as a colonial country; the relationship between social housing, dispossession, and land; and to identify strategies being developed by housing providers and others to address reconciliation and decolonization through housing. This research will connect theories of land, property, and housing in a settler colonial and capitalist context, with implications for professional planning scholarship and practice.

Citations


Key Words: Settler colonialism, social housing, housing policy, Canada
FILLING THE BLIND SPOTS: ASSESSING DISTRIBUTIVE EQUITY IN FLORIDA’S LOCAL HOUSING PROGRAM FOR DISASTER RECOVERY
Abstract ID: 1122
Research in Motion (RiM)

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In 2017, Florida suffered devastating impacts from Hurricane Irma, resulting in 123 deaths and widespread housing damage and displacement (CDC, 2018). Previous studies have examined social factors affecting the distribution of U.S. federal assistance after natural disasters, including race, income, and housing tenure (Drakes et al., 2021; Emrich et al., 2020). These studies focus on social vulnerability: the disproportionate susceptibility of populations to disaster impacts based on factors such as poverty, race, gender, and housing status (Cutter et al., 2003; Elliott & Pais, 2006). However, little is known about the role of local programs in addressing gaps in federal resources. Therefore, we investigated the complementary roles of federal and local disaster recovery assistance in supporting socially vulnerable groups affected by Hurricane Irma.

This study examines Florida’s State Housing Initiatives Partnership (SHIP) program as a case study in local response to housing damage. Under SHIP, Florida provides housing funds, including disaster recovery assistance, to counties and cities for local allocation. We compare distribution of SHIP funds following Hurricane Irma with the Federal Emergency Management Agency’s Individual Assistance program (FEMA IA). The study addresses this research question: compared to FEMA IA, were SHIP resources more available to socially vulnerable neighborhoods, especially African American and Latino neighborhoods?

We constructed a unique dataset of household-level FEMA IA and SHIP records and estimated multivariate models to assess Census tract-level distributions of assistance. Negative binomial and zero-inflated negative binomial approaches were used to examine associations between flood damage, social vulnerability indicators, and the number of SHIP- and FEMA-assisted households. We also calculated location quotient indexes to categorize neighborhoods into SHIP-high FEMA-high, SHIP-high FEMA-low, SHIP-low FEMA-high, and SHIP-low FEMA-low groups, and compared these neighborhood types using multinomial logistic models.

Analysis of county-level SHIP flows shows that socially vulnerable neighborhoods were served by the program. However, at the state level, the record of the SHIP program in reaching socially vulnerable groups was mixed. Specifically, the multinomial logistic models indicated that high residential density, more vulnerable age groups, fewer racial and ethnic minorities, and higher incomes were associated with SHIP-high FEMA-low neighborhoods. Supplementary household-level analysis confirmed that compared with FEMA IA, SHIP disaster assistance was more targeted toward White and Hispanic populations and renter households.

The study shows local programs can address gaps in federal programs, such as reaching vulnerable age groups and renters, but these programs do not necessarily reach all traditionally underserved groups. More targeted interventions may be necessary to ensure that local programs address known gaps in federal resources for racial minorities. There should be further studies about the conditions under which local housing programs maximize such potential.

Citations

EXPLORING THE EFFECT OF ADUS ON PARKING AND TRAVEL BEHAVIOR

Abstract ID: 1125
Research in Motion (RiM)

VOLKER, Jamey [University of California, Davis] jvolker@ucdavis.edu, presenting author

Accessory dwelling units (ADUs) – also called in-law units, secondary units, or granny flats – ADUs are small self-contained dwellings that share the site of a larger dwelling structure, either as a standalone structure or as a converted portion of the larger dwelling itself. Permitting of accessory dwelling units has skyrocketed over the last five years in California, as recent state laws have made permitting easier than ever. This has obvious ramifications for California’s housing supply (Volker & Handy, 2022), but it also bears on the state’s efforts to reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions. ADUs are often built where off-street parking used to be – such as through a garage conversion – and state law prohibits local governments from requiring replacement of those converted off-street parking spaces. Furthermore, ADUs are often exempt from minimum off-street parking requirements under state and/or local law. As a result, ADUs can reduce total off-street parking supply (Volker & Thigpen, 2022). Reducing residential parking availability can, in turn, reduce vehicle ownership, use, and resulting GHG emissions (Manville, 2017; Millard-Ball, West, Rezaei, & Desai, 2021).

In this ongoing study, I am investigating the effect that ADU construction has on off-street parking supply and, in turn, vehicle ownership and VMT. I am in the process of conducting a survey of ADU owners in Sacramento, California about their parking availability, vehicle ownership, and vehicle travel before and after ADU construction. I hypothesize that ADU construction has reduced off-street parking supply (e.g., through garage conversions) and, in turn, reduced vehicle ownership and VMT. I will also explore geographic (including transit proximity) and socioeconomic differences in where ADU construction has caused a net reduction in parking and/or VMT using a range of data, including data from the US Census and Zillow home value estimates.

My results will provide baseline information to policymakers about whether and by how much ADUs and off-street parking reallocations affect VMT. This will be especially useful to local and regional governments to policymakers as they develop and prioritize strategies to reduce VMT and GHG emissions, including in sustainable communities strategies (per SB 375 in California), general plans, climate action plans, and VMT mitigation banks and exchanges. ADUs and parking management are increasingly common strategies. Indeed, on its website, the California Air Resources Board lists parking supply management and planning for accessible housing “at a range of densities” as some of the “key aspects” of sustainable communities strategies. But the magnitude of the effect of ADUs on parking supply, vehicle ownership, and VMT remains an open question. This project will help answer that.

Citations

https://www.cdc.gov/mmwr/volumes/67/wr/mm6730a5.htm#:~:text=Among%20the%20129%20hurricane,years%20accessed%2004.03.2023


Key Words: Disaster recovery, Social vulnerability, Distributive equity, Social equity, Local housing program
UNMET NEEDS OF PUBLIC HOUSING RESIDENTS DURING HURRICANE HARVEY, WINTER STORM URI, AND COVID-19

Abstract ID: 1131
Research in Motion (RIM)

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Houstonians have experienced a myriad of, sometimes compounding, disasters in recent years including Hurricane Harvey, COVID-19, Winter Storm Uri, and repeated flooding events. Though the effects of each disaster are far-reaching, their impacts are not uniform across the city. Low-income populations often experience disparate impacts of disasters. The goal of public housing is to provide safe and decent rental housing for low-income families, the elderly, and the disabled. However limited studies have focused solely on public housing residents and their experiences when facing hazards and disasters. This research focuses on the unmet needs of Houston public housing residents through Hurricane Harvey, COVID-19, and Winter Storm Uri. The goals of this research are to: (1) identify how public housing residents perceive their agency during current disaster mitigation, preparedness, response, and recovery planning processes; (2) identify needs that went unmet for public housing residents during recent disasters; and (3) identify how public housing authorities and local, state, and federal agencies can better support public housing residents during disaster mitigation, preparedness, response, and recovery. To achieve these goals, I partnered with the Houston Housing Authority (HHA) to conduct face-to-face key informant interviews with HHA administration, housing counselors, and public housing residents. Additionally, I conducted a risk assessment for all public housing developments managed by the HHA. Ultimately, this research will identify and share lessons and experiences by public housing residents, HHA administration, and housing counselors who have experienced multiple, often compounding, disasters.

Citations


Key Words: Housing, Disasters, Recovery, Needs

EVALUATING THE DEMAND-SIDE AND SUPPLY-SIDE OF HOUSING POLICY IN SOUTH KOREA: WHICH POLICIES ALLEVIATE HOUSING AFFORDABILITY STRESS AND IMPROVE MENTAL HEALTH?

Abstract ID: 1197
Research in Motion (RiM)

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Housing affordability stress (HAS) is a pressing social concern, affecting many individuals’ ability to find adequate housing (Wetzstein, 2017). The high cost of housing can pose a huge economic threat, especially to low-income households, as they are forced to spend larger percentages of their income on housing while having less income available for other necessities. Therefore, the concern is not necessarily the difficulty in acquiring affordable housing but also the quality of life, including health, well-being, and resilience (Baker et al., 2015).

To alleviate HAS, the government has implemented two types of housing policies: demand-side (e.g., housing vouchers) and supply-side (e.g., public housing). Despite its role in ensuring affordable housing for recipients, a significant proportion of recipients still suffer from HAS due to an almost complete lack of income. Moreover, these policies have mixed impacts on mental health. Few studies have found an adverse relationship between mental health and supply-side policy; social isolation and stigmatization can contribute to lower mental health among public housing residents (Bentley et al., 2018).

HAS can play an important role in mediating the relationship between housing policy and mental health as there is some evidence of a correlation between HAS and mental health outcomes. Individuals that experience persistent HAS are at a greater risk of poorer mental health compared to those who have not experienced such hardships (Baker et al., 2020). While some studies have examined the direct effects of HAS on mental health, others have explored the indirect pathways through which HAS affects mental health. Nonetheless, the association between HAS and mental health is a complex and multifaceted issue, requiring further research to enhance our understanding of its underlying mechanisms and potential intervention strategies.

To fill this research gap, we sought to compare the effectiveness of housing policies in alleviating HAS and explore the mediating impact of HAS on the association between housing policies and mental health. Specifically, this study examines the following questions: (1) Does housing policy affect the escape from HAS? (2) Is supply-side policy more effective than demand-side policy? (3) Does housing policy affect mental health through the limited role of the policy in alleviating HAS? To address these questions, we use the Korea Welfare Panel Study between 2007 and 2020 and employ a panel data regression model.

This study reveals several findings. First, the economic and sociodemographic characteristics of individuals, including age, gender, income, and employment status have associations with mental health. In addition, the type of housing policy received by individuals is also found to have an impact on experiencing HAS. Specifically, a supply-side policy recipient is likely not to experience HAS, whereas a demand-side policy recipient is likely to experience HAS. Third, individual who experienced HAS is likely to have poorer mental health. Lastly, housing policy negatively impacts mental health, while HAS does not play a mediating role in the relationship between housing policy and mental health. Even after we added the lagged mental health variable, the housing policy still has a statistically significant association with mental health.
The findings provide valuable insights into the relative effectiveness of different housing policies in alleviating HAS and improving the mental health of policy recipients. Given that few studies exist comparing housing policies in addressing HAS and the mediating effect of HAS on the relationship between housing policy and mental health, our findings should be of broad interest to policymakers seeking to reduce housing-related hardships and enhance mental health. Our comparative study is a fundamental step in understanding the most effective way to develop more successful housing policies with limited resources.

Citations


Key Words: housing affordability, housing policy, mental health, mediating effect, panel data regression model

FINANCIALIZED EVICTION-OWNER NETWORKS AND EVICTIONS: WHAT IS THE RELATIONSHIP BETWEEN CORPORATIZED OR FINANCIALIZED HOUSING INVESTMENT MODELS AND EVICTIONS?

Abstract ID: 1288

Research in Motion (RiM)

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Driven by post-foreclosure crisis investment patterns, current research has examined corporate landlord ownership and management strategies in single family residential (SFR) properties. For example, Raymond et al. (2018) found that landlords in Atlanta with portfolios of at least 15 SFR homes were 8% more likely to file evictions. Expanding scope beyond SFR, Immergluck et al. (2019) found that large owners and large buildings both had higher eviction filings. In addition, Gomory (2021) shows that large landlords in Boston filed evictions at two to three times the rates of small landlords, often as rent collection strategies. Graziani et al (2020) show how post Great Recession investment strategies centered corporate ingressions into urban communities capitalizing on distress through various systematic strategies of profit-making.

San Francisco represents the cutting edge of financialized housing investment strategies where investors use shell companies, limited partnerships and corporations as part of investment strategies to pool funds, shield knowledge of direct ownership from tenants and extract maximum yields. Beginning in the 2010s tenants and tenant organizers in San Francisco found themselves unable to know who was their owner and who were filing evictions as a pattern of regularized displacement across San Francisco neighborhoods. The Anti-Eviction Mapping Project now recognizes these LLC and LP investors and their investment decisions as the unit of behavior in extractive-landlord evictions. In response, we created evictorbook.com to unmask and link discrete shell companies into networks of eviction-ownership entities.

To understand the disproportionate role that corporate landlords play in evictions and housing instability, we use CA Secretary of State Business filings records to create and link networks of individual LPs and LLCs by finding interlocking individual investors filing addresses to construct webs of discrete ownership networks. We combine
20 years of eviction filings and property transfer data to identify evictors, owners and ownership-network evictors’ periods of ownership, along with building characteristics. Using our novel dataset we can directly address the corporate vs non-corporate firm eviction behavior at the level of ownership type.

Descriptive results showed: (1) in San Francisco, corporate owners were responsible for 33% of evictions over the last 5 years in San Francisco despite owning 12.5% of multi-family buildings, and in Oakland, corporate owners were responsible for 25% of evictions while owning 8.9% of multi-family buildings.

(2) For all eviction filings in San Francisco from 2017-2022: we calculated eviction rate comparisons for business-owner entities and non-corporate owners normalized for both time-owned and number of units owned. Corporate entities as a group filed evictions at 137x the rate of non-corporate owners, while for buildings with more than 1 unit, the rate is 1200x. (3) Comparing similar ownership classes we found that for owners who own 10+ properties, the eviction rate of corporate networks is 16X that of non-corporate owners and for those who own 2-9 parcels, it is 14.2x.

These findings suggest that informal LP and LLC ownership networks present a greater danger than Wall Street landlords to urban communities and tenants in urban environments because they have operationalized evictions as a profit mechanism; whereas Wall Street landlords remain focused on single family residential investment strategies.

Citations


Key Words: eviction, financialization, landlords, llcs, networks

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**Track 6 Posters**

**STUDY ON THE EXTERNAL POPULATION INFLOW RATE AND DEVELOPMENT PROJECT INFLUENCING FACTORS: FOCUSING ON THE HOUSING SUPPLY PROJECT IN SOUTH KOREA**

Abstract ID: 706

Poster

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As the natural population growth rate in Korea has been exceedingly low, local governments are actively pursuing strategies to attract new residents for long-term urban revitalization and development. It has been identified that the availability of new housing through development projects is a significant factor in attracting population from other regions. While there are numerous methods for supplying new housing, maintenance projects, such as redevelopment and reconstruction, have a limited impact on population growth because they affect the supply of existing residents. Therefore, the study focuses on development projects that accompany housing supply, which are crucial for attracting new residents. However, studies on the influx of external population in development projects are scarce, with the majority focusing on the capital region's Gyeonggi-do. In addition, because the population inflow calculation procedure is based on a sphere of influence that is limited to the city and county where the project district is located, the effect of neighboring cities and counties is not considered. The objective of this study is to evaluate the external population influx caused by development projects using the external inflow rate, one of the evaluation criteria. To accomplish this, first, among the various categories of development projects, development project districts completed between 2015 and 2019 were selected as target areas among the 18 types of public housing sites announced in Korea. After redefining the concept of the external inflow rate's influence area, the external inflow rate is calculated for each district using three years of data on population movement into the development district. This enables the research to accurately determine the external inflow rate for each district. The relationship between the inflow rate of each development district, the characteristics of the development district, and the characteristics of the region to which the development district belongs are determined using multiple regression analysis. The variables influencing the rate of external inflow are derived from previous research. The results of the analysis indicate that the external inflow rate is affected by factors such as distance from the central city, total area, and whether the area falls within the metropolitan region in terms of development zone characteristics. Regarding regional characteristics, the external inflow rate is significantly influenced by the area's metropolitan status, population growth rate, number of industrial parks, and total population. Unlike previous studies, it is discovered that the type of development undertaking had no significant effect on the external inflow rate. The results of the analysis can be used as a foundation for selecting development zones and estimating population influxes during policy formulation. In terms of population growth, they can also help identify the potential ripple effects of development projects. In addition, the urban and rural fundamental plans of Korea account for both natural and social population growth in their population estimation phases. Depending on the characteristics of the development projects, it is necessary to establish an external population influx rate when calculating social population growth. This study can therefore serve as a premise for the rational selection of population influx rates from outside sources.

Citations


Key Words: residential mobility, housing supply, regional features

PLACE & PROPERTY VALUES: AN INTERGENERATIONAL LOOK AT HEIRS' PROPERTY OWNERSHIP
Abstract ID: 1327
Poster

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In America, $72.6 trillion in assets will be transferred intergenerationally to heirs through 2045 (Cerulli, 2021). Property ownership has also been the primary wealth building tool within and across generations. Further, ownership can mean a sense of pride, promise of wealth creation, sense of place, and belonging for property owners. However, without clear and unencumbered title to land or a property, it is difficult to access capital, make property improvements, or qualify for government funds available to property owners. Heirs’ property is a home or land that is inherited or passed from one generation to another generation without a legally designated owner. In America, Heirs’ property is usually created when someone dies “intestate,” meaning without a will. Though the concept of land ownership is already complex, for heirs’ property owners, the matter is even more so convoluted. Heirs’ property owners face many challenges that make them vulnerable to land and financial losses caused by intra-family conflict or threat of outsiders such as encroachment, tax sales, adverse possession, and property condemnation. Existing literature in heirs’ property has primarily focused on community planning constraints and economic or monetary value of land represented by the highest and best use of property (Baab, 2011; Gaither & Zarnoch, 2017; Hitchner, Schelhas & Gaither, 2017). Few heirs’ property studies examine the importance of such form of ownership as a representation of self-identification and cultural value. Fewer studies still offer comparative analysis of economic versus cultural value.

In this study researchers aim to explore the intersection of property and identity, to advance a discussion among community planners that heirs’ property resolution and prevention efforts should not only advance assess to land’s financial capacity, but also account for owner’s self and cultural identity. The project takes the form of a creative scholarship, weaving together personal narratives, interviews with property owners, and critical analyses of existing literature on place identity, self-identity, cultural identity, and the importance of home. Specifically, we conduct semi-structured interviews with heir owners in southern United States. We ask, “Do perceived value and meaning intergenerational differences exist among heirs’ property owners navigating title clearance and post clearance land use decisions?”

We compare experiences of oldest living heirs or elder family members to experiences of younger family members to investigate differences in connection to the land, perception of monetary value and meaning making across generations. The paired interview approach allows for greater insight into the tradeoffs between the financial and cultural connection to land. We find that shared property interest can be used to assert familial, cultural and political identity, and to resist dominant power structures. Findings also highlight the role of property in shaping individual and collective memories, sense of belonging, and how property can serve as both a site of trauma and healing simultaneously. For others, the value of familial land is found in the attractiveness of the land in economic gain. Real estate or financial markets and the ability to leverage land. By exploring the intra-family interplay between property and identity, the project aims to deepen our understanding of the complex relationships between individuals, communities, and the spaces they inhabit.

This research holds significant implications for understanding the motivations of heirs in resolution encumbered property title resulting from informal shared property. This is of relevance to policymakers, heirs’ property legal, advocacy and education professionals. Gleaning motivation and insights from owners most impacted by of heirs’ property resolution efforts can help stakeholders create better tools and approaches to achieving intended consequences while minimizing unintended outcomes.

Citations


Key Words: Heirs Property, place making, cultural identity, property ownership, land use
In recent years, the relationship between urban and rural areas in the Global South has undergone significant changes. This transformation is driven by various social, economic, and political factors, such as the expansion of agro-industrial economies, the emergence of national projects that reshape villages and regional landscapes, and the pressure to convert agricultural land into urban land in peri-urban areas. These developments challenge our understanding of the "city" and the "countryside," and highlight the importance of re-examining the interface between urban and rural areas and the role of planning in this context. This session brings together diverse perspectives on how planning and urban–rural relations articulate across a variety of contexts in East Asia, South Asia, and Latin America.

Objectives:

- Gain an understanding of the evolving socio-spatial patterns of urbanization at the urban-rural interface and their impact on local communities
- Analyze how planning practices have been used to facilitate the transformation of rural areas into urban
- Evaluate the ways in which urban and rural institutions, actors, and values are being recombined in response to the changing dynamics of urban-rural relations

In recent decades, small and mid-sized towns in the hinterlands of Brazil, particularly in the state of Mato Grosso, have experienced rapid growth rates — between 4 and 9% a year, which are high rates for this period in Latin America. They now range in size from 40,000 to 100,000 inhabitants. Such urban growth was fueled by the expansion of large-scale, export-oriented agriculture (primarily soybeans), as well as the agro-industrial development that followed it. With the current trajectory of soybean valorization in the international market and planned infrastructure investments — such as a highway duplication and the construction of various railways —, local planners, politicians, residents, farmers and other economic agents alike anticipate further expansion of these "soybean cities" in the near future.
This paper seeks to analyze the political economy of urbanization driven by agro-industrial development through a particular urban planning tool: the urban boundary, which delimits where new urban subdivisions are allowed. The urban boundary, in a context of horizontal urban expansion, is one of the most consequential instruments of planning and it has, indeed, been prioritized in local urban planning debates — while various other tools inscribed in the national City Statute, such as the Special Zones of Social Interest, simply don’t appear in local debates or are deployed in master plans. By literally tracing the evolution of urban boundaries over time, as well as figuratively tracing debates and rationales used to argue for urban boundary (re)definitions, this paper examines how various urban and agrarian actors express their expectations and interests towards urban growth.

This paper reveals the range of discourses shaping the definition and instrumentalization of urban planning tools, from urban planners seeking to "order" space to agro-industrial entrepreneurs striving to create an image of a "booming" city, to landowners-turned-real estate developers interested in transitioning their soybean fields into urban neighborhoods. The absences in their discourses are revealing as well: in highly exclusionary cities, urban boundaries are not mobilized as an instrument to expand access to land. Finally, the paper also shows how the distinction between "urban" and "rural" as governmental categories remains operational, particularly in the management of land use transformation.

To achieve these objectives, the paper conducts an in-depth analysis of two exemplary "soybean cities" in Mato Grosso: Lucas do Rio Verde and Sorriso. In Lucas do Rio Verde, the analysis focuses on current debates to expand the urban boundary by 30%, while in Sorriso, the analysis examines a consolidated change when the boundary was expanded to incorporate vast and disconnected territories south of the existing urban fabric. The paper draws on ethnographic fieldwork and interviews conducted in 2019 and 2022 in Lucas do Rio Verde and Sorriso in the state of Mato Grosso, Brazil. It also utilizes document and archival analysis of meeting minutes, public hearings, and local newspaper coverage.

Citations


Key Words: urban boundary, urban growth, agro-industrial economy, urban–rural relations, Brazil

RURAL SIMULACRA: COORDINATING, BUILDING, BEAUTIFYING, PLANNING, AND REVITALIZING CHINA’S NEW COUNTRYSIDE
Abstract ID: 551
Abstract within Pre-Organized Session 25

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This paper reviews the last twenty years of China’s rural development programs, including urban–rural coordination (2003), building the socialist new countryside (2005), the beautiful countryside (2013), the national plan for new-type urbanization (2014), and rural revitalization (2018). These programs are ostensibly designed to solve China’s rural development crisis, which emerged in the 1990s as rural areas and populations were left further and further behind by the nation’s accelerating urbanization. Through these programs, the state has deployed principles of comprehensive rational planning to lessen China’s stark urban–rural divisions and inequalities. This paper asks the following questions: How have these programs changed the planning of China’s villages? And how are villages being transformed by these new practices?

To answer these questions, the paper brings together two types of evidence: (1) A systematic review of the policy documents associated with these five programs. These documents are publicly available and published online but have not previously been analyzed as a single corpus. The paper takes a genealogical view of these documents, tracing the themes and patterns that emerge over time. (2) Ethnographic evidence, including unstructured interviews and participant observation, gathered over a decade of fieldwork in a dozen villages across four provinces: Sichuan, Chongqing, Anhui, and Zhejiang.

The paper argues that these programs have functioned together as a single, evolving state project to turn rural areas into extensions of urban development. New village planning practices encode urban conceptualizations of the rural, reflecting the urban positionalities of the planners and policy makers who are responsible for developing and implementing these programs. In other words, villages are being planned according to a normative ideal of what rural areas should be, not in order to support villages’ actually existing social and economic fabric. Villages are increasingly being turned into tourist sites, industrial farms, and ecological protection zones, or what I call “rural simulacra.” These sites might look rural, but they are designed to serve the consumption needs of urban elites rather than to support the lives of villagers, who are being displaced and forced to migrate to towns and cities.

This paper makes several important contributions to planning scholarship: (1) It is the first paper to systematically review these programs and their collective effect on rural planning in China. (2) It explores larger questions of how national policy affects local planning practices. And (3) it focuses attention on village planning, which is an understudied domain within the field.

Citations


Key Words: China, international development planning, village planning

FROM AGRICULTURAL FIELDS TO IMAGINARY SMART NEIGHBOURHOODS: UNRAVELING THE LAND POOLING PROCESS IN PERI-URBAN VILLAGES OF DELHI, INDIA .
Abstract ID: 552
Abstract within Pre-Organized Session 25

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Peri-urban areas are agrarian - urban frontiers marked by unique historical, social, cultural, political, spatial and economic relations rooted in local contextual settings. Much of the urban land transformation across various cities in Global South is marked by identification and planning of agricultural lands located on peripheral areas of the city to undertake development. Through active involvement of private sector in assembling land and infrastructure development, Delhi Development Authority (DDA) has identified urbanisation of agricultural lands for the next phase of urban development of Delhi. This marks a significant change in DDA’s approach towards land development in peri-urban villages, reflecting a shift from State led land acquisition planning to a more private sector led market planning. The shift has been marked by emergence of different stakeholder groups such as local land owners, property agents, big developers, further driven by land ownership pattern, caste dynamics and presence of development authorities. The research aims to understand the shifting role of State in development and planning of peri-urban areas through examining the role out of land pooling policy. Focusing on four villages declared as ‘Urban’, the study examines the roll out of policy in place and over time, the emergence of different types of land owning groups, and their response marked by conflicts, negotiations, contestation and acceptance towards the policy. A qualitative case study approach that relied on GIS Mapping, documentation, archival records, interviews and photographic survey was used in the analysis of case study areas. The rationale behind adopting this approach was to understand and examine the decision-making process of important stakeholder groups such as land owners and development agencies as when, why and how certain decisions were taken with regard to time, space and process.

The research findings reflects a shift in role of the state from imposing top-down modernist vision master plans to a more bottom up, private sector led entrepreneurial development. The mapping exercise and personal interviews revealed that the willingness of villagers to participate in the policy is dependent on social, economic, spatial, and political factors rooted in local context and unique to agrarian urban areas. For instance, unsustainability around agriculture coupled with land ownership pattern, ambiguity around certain provisions of the policy, competition between village landowners and property agents/developers, caste equation inside the village largely determines the stakes of village landowners participating in the policy or not. The land pooling approach raises a question on inclusive, affordable, and accessible housing for poor income groups, even the small and marginal land owners inside the village as the policy is majorly led by large landowner groups and developers. The emerging conflicts, negotiations and response from different stakeholder groups is thus, the result of changing nature of planning at the larger level i.e., shift from comprehensive state led planning to market led speculative planning. The research is one of the few qualitative studies undertaken while analysing the implementation of land pooling policy in its pre-implementation phase. The research unveils certain questions, insights and trends that remains to be analysed when the policy is implemented across 105 urban villages of Delhi. The research through analysing the expanding role for new private actors - acting as individuals and perhaps also collectives (based on caste groups, landholding size, similar practices or economic interests) within the new land pooling policy, will contribute to understanding the field of land in planning.

Citations


Key Words: Peri-urban, Land Pooling, Agrarian Planning
PERIURBAN cartographies: kolkata’s ecologies and settled ruralities
Abstract ID: 553
Abstract within Pre-Organized Session 25

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For residents of periurban kolkata, the interrelated emergence of “quiet” power (Allen, 2016) in the urban and regional planning practices of the national government of India and the government of West Bengal have produced more modes of interaction with the state. Earlier measures of authority and domination by the state relied on institutional size or organizational capacity articulated through specified territorial scope. Whereas current institutional arrangements manipulate outcomes, offer the lure of inducement, and use the art of persuasion or inviting gestures of seduction (2016, p. 153). Toward a goal of augmenting this multiplicity, the research delves into, and represents, the “actual socio-spatial and political ecological processes by which specific forms of urbanism come into being” (Friedmann, 2016, p. 163), including the periurban. The research reported is a situated urban political ecology of territory. It is an up-close study of an “ordinary” (Robinson, 2005) one-kilometer square area of periurban kolkata, in gangetic West Bengal.

A close reading of both early and current planning documents, and in particular their visualization strategies, reveals how urban politics is evident in the nonhuman entities of paper documents, as well as digital interfaces and databases. The research historicizes this materiality itself, by examining the ways in which these graphic entities and the associations they build have “flickered into view and out again” (Jardine, 2017, p. 57). In the meantime, the situated spatial needs and distinct futures of the periurban municipalities are shown to be out of view altogether. Also missing are commitments to building institutional capacity through decentralized (“inclusive”) models of governance, and the need to think about how urban development and rural prosperity might be more synergistic and complementary. Methodologically, the research breaks new ground by drawing on the intersection between such critical accounts of existing cartographic representations and the frameworks of social and ecological governance they represent, with qualitative interpretivist approaches to everyday settlement processes, and diagrammatic visualizations. Through these methodological lenses it is possible to better see the incrementally changing context and the fragmented and piecemeal processes that feature where urban and rural land uses and livelihoods become entangled. Such relations are visualized with many photographs, line drawings, and maps.

The findings reveal that both long-term and newcomer residents participating in the study area aspire to “become urban” and they live in a reality that is on a slow and fragmented pathway to that urban future. However, the wait for this urban future is so long that the option of “staying rural” is reduced or destroyed in the process. Municipal practices like counting linear feet of paved roads, drains, drinking water pipelines, numbers of streetlights and latrines mask the incremental, socio-spatial adjustments that residents make in anticipation of, and in response to, each improvement. Incremental change in the study area is thus characterized by the ordinary, slow state of being neither one thing nor another. Furthermore, in fragmented, heterogeneous change one slow decision might generate intended or unintended transformative outcomes. As such, the moral imagination of the study is motivated by a desire to find incremental ways to improve on or alter these characteristics for the benefit of residents in the study area, and for similar areas in monsoon asia.

With regard to planning scholarship, the study is relevant as it purposefully shifts attention from the “almost-urban” toward a larger, collective and comparative project of learning from multifaceted “kinds of urban”. It is more than just another instance, another isolated case study. It is a situated, contribution toward a newly invigorated urban comparativism (Jacobs 2012). After all, emplaced renderings of urbanisation are needed for comparative practices to be meaningful.

Citations
NEGOTIATING THE REGION, ORDERING SUSTAINABILITY: PLANNING AND SOCIO-LEGAL AGENCY IN THE AGRO-INDUSTRIAL HIGHLANDS OF CENTRAL MEXICO

Abstract ID: 554
Abstract within Pre-Organized Session 25

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This paper explores what it takes to get something new going when it comes to pursuing new territorial governance logics seeking a degree of ecological balance in regions destabilized by localized effects of climate change. As an in-depth exploration of regional politicking and negotiation, it tracks projects of creative socio-legal institutional thinking, negotiation, and planning work in the context of an urban-rural system in the central Mexican highlands spanning small and mid-sized urban centers scattered across a larger agro-industrial landscape, a landscape typical of those linked to global commodity production chains (Gras and Hernandez, 2013; Gordillo, 2019). Located on the far outskirts of one of the most urbanized regions in the world, and as such being a prime location for industrial operations with national and transnational supply chains, the Apan plains (as study site) is dealing with rising local temperatures, changing rainfall patterns, a near totally depleted aquifer, the desertification of ancient lake systems, chaotic rural-to-urban land turnover, and the social and physical maladaptation of mono-crop farming practices producing barley for multinational beer industries. In addition to being a major purchaser of barley grown in the region, Grupo Modelo, a subsidiary of European beer conglomerate AB-InBev, opened a major brewing and production facility in the Apan plains in 2019.

Starting from the premise that this is a paradigmatic landscape of extended urbanization (Brenner & Schmid, 2014) subject to multi-scalar, even global, law and policy regimes (Eslava, 2015; Aust and Rodiles, 2021) under historically specific conditions of the Anthropocene, this study asks: what can be done, what can planners do, if their goal is to restore a degree of ecological balance to such an urban-regional system? Water scarcity, competing resource uses and rights, layered and disputed sovereignties, varying ideas and extents of obligation/solidarity, as well as multi-scalar “regulation” are, empirically, all critical components of the negotiated regional processes at play in this case, despite being under conceptualized in planning implementation scholarship. In response to these empirics, this study elaborates tentative lines of grounded theory about the daily work central to professional projects of “negotiation” and “struggle” in such contexts, arguing that plannerly abilities to navigate interrelated socio-legal ideas of 1) unfixed territorial system boundaries, 2) denialism and responsibility claim making in contexts of “crisis”, and 3) unstable subjectivities around ideas of risk perception, self-interest, and solidarity are all key to the political and technical task at hand. The paper presents empirical findings based on two and half years of project engagement in multi-stakeholder planning and policy efforts involving small-holder farmers, municipal leaders, state and federal agencies, national and international planning experts, British and German international development agencies, and regional industrial operators.

The results speak to larger questions relevant to planning implementation and negotiation amidst extended urbanization dynamics. Such questions include: where, and by whom, is “urban” and/or “regional” policymaking that effects the ecologies of urbanizing and industrializing hinterland territories taking place? How might those disparate sites of authority be actively encountered, engaged, and influenced? And amid such dispersion, how, when, and for whom might narratives of “crisis” consolidate as salient discourses capable of compelling action toward territorial regeneration?
OLD WINE IN NEW BOTTLES? THE RESILIENCE OF SOCIALIST APPROACHES IN LAND PLANNING INSTRUMENTS

Abstract ID: 605
Roundtable

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HIRT, Sonia [University of Georgia] sonia.hirt@uga.edu, participant
BAIRD-ZARS, Bernadette [Rutgers University] b.bz@rutgers.edu, participant
SHAFFER, Yulia Fadina [University of Georgia] yulia.fadina@uga.edu, participant

Within Central and Eastern European and Eurasian post-socialist states, a “cautious revival” of urban planning has taken place in recent years. Among new European Union (EU) member states and aspirants, increased planning activity reflects conformance with EU accession guidance and efforts to access critical EU funding opportunities. Additionally, the renewed interest in planning is driven by citizen organization, social activism, and demands for urban policy reforms.

This roundtable examines this revival of planning in spaces with socialist planning legacies through two tracks of inquiry. First, the session explores the legacies of socialist and central-state planning, examining the tendency evident amongst plans emerging from these contexts to replicate old approaches in spite of new structural conditions. For example, contemporary urban planning in many post-Socialist states fails to cooperate with market processes, lacks meaningful citizen engagement, and relies primarily on technocratic, centralized authority to achieve plan visions. The session will draw attention to modes and practices related to both plan policymaking and plan implementation. Session presenters will draw on research from diverse contexts (Eastern Europe, the Caucasus, and Middle East) to highlight the ways geo-political alignments, transnational influences, urban governance regimes, judicial practices, and fiscal frameworks mediate planning practice. The discussion will aim to clarify what is new or changed in the emergent revival of planning, distinguishing between approaches that have ‘survived’ and remain perceived as useful, instruments that have undergone institutional adaptation, and processes that can best be described as recalcitrant holdovers that limit innovation and change in planning.

Second, the roundtable will highlight the various boundaries that create either norms or tensions relative to
planning. These may be geopolitical, such as the particular approaches to planning that may be found in EU member states or aspirants. Boundaries may also be structural, reflecting levels of transition and marketization, which in turn shapes the role of planning in balancing public and private interests. Conflict also creates a variety of boundary issues that impact planning, including issues of displaced persons, jurisdical geographies, shifts in socio-demographic dynamics, and economic uncertainty.

The researchers in this session contribute insights from their work on regions representing a spectrum of political and development contexts. Sonia Hirt, an expert on Central and Eastern European planning and land use regulation, will draw on recent research from Varna, Bulgaria that identifies the persistence of centralized, homogenous approaches to planning. Evangeline Linkous contributes finding from research on the development of Tbilisi, Georgia’s 2018 Master Plan that point to the importance of co-evolving local governance institutions in driving plan implementation. Bernadette Baird-Zars draws on a network of local planners, municipal documents and social media postings from Aleppo, Syria to highlight the specific land use processes in action that continued to be enforced during the height of the conflict and again under the re-established regime. Yulia Fadina Shaffer shares work examining urban ecosystems and environmental planning in Baku, Azerbaijan. Collectively, these works engage in questions about the level of meaningful political engagement engendered in and by the planning process and the ways planning does or does not respond to or change structural conditions.

Citations


Key Words: Post-socialism, European Union, Eurasia, Master planning

INVESTING IN URBAN INFRASTRUCTURE FOR SUSTAINABLE DEVELOPMENT: WHAT DO URBAN PLANNERS NEED TO KNOW?

Abstract ID: 852
Roundtable

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SMOKE, Paul [New York University] paul.smoke@nyu.edu, participant
JACKSON, David [United Nations Capital Development Fund] david.jackson@uncdf.org, participant
LASALLE, John Michael [Climate Policy Initiative] JohnMichael.LaSalle@cpiglobal.com, participant
NARANG SURI, Shipra [UN-Habitat] shipra.narang-suri@un.org, participant

It is well established that major investments in public infrastructure are required in middle- and low-income countries both to promote overall economic growth/more inclusive development and to address the global climate crisis. Many middle- and low-income countries face enormous deficiencies in basic infrastructure—the World Bank estimates that the infrastructure investment gap in these countries is at least $1.3 trillion per year. Needs are expected to surge as population continues to grow in many countries.
Much required investment is in sectors that subnational governments do or could play a significant role in delivering and financing. Evidence and performance vary across and within countries with different intergovernmental systems and fiscal arrangements, but there is ample data to show that subnational governments in many countries, particularly metropolitan and city governments, are in a strong position to contribute significantly to sustainable development through public investments, revenue generation, and managing functions that contribute to both local and national goals.

Funding innovations are required if sustainable infrastructure gaps are to be covered. Much urban infrastructure in middle- and low-income countries is financed by intergovernmental fiscal transfers and special funding mechanisms. Subnational borrowing in these countries is largely concessional and flows from sovereign governments and special financial intermediaries, often funded by loans from international financial institutions. These forms of development finance are essential in middle- and low-income countries, but if not well designed and used, they create disincentives for urban borrowing even when allowed and feasible. If richer cities borrow for self-financing projects, grants and subsidies could be substantially redirected to fiscally weaker local governments for essential public services that serve disadvantaged populations and require subsidization.

Equally important for sustainability is the need for urban governments to be able to finance recurrent costs associated with public investments. Once infrastructure is built, funds are required for operating and maintaining it, as well as to service any debt incurred to finance the capital costs. This is often a great challenge in middle- and low-income countries.

In short, the sizable needs for urban sustainable development require climate friendly investments (e.g., in climate adaptation, energy conservation, green growth, etc.) and a range of mechanisms to fund them. A national framework must offer investment finance options that provide wealthier cities greater access to (and incentives to use) capital markets and fiscally weaker local governments various forms of subsidized lending and grants. In all cases, recurrent revenue mobilisation is needed from both traditional sources (e.g., property taxation and user fees) and innovative sources (e.g., land value capture). The successful implementation of even the best development plans depends on having these funds and using them well.

This panel brings together planning academics and practitioners from development organizations working on these issues to share their ideas, findings and experiences. Brief comments from the panelists will be used to generate a robust discussion among the roundtable participants.

Building on past ACSP sessions, this roundtable will consider the following questions:

What are promising options for increasing investment financing for climate friendly urban development? What can cities do independently and what support/coordination is needed from higher levels of government, neighboring jurisdictions, and external organizations?
What types of recurrent revenues are likely to best fill the gaps in financing the operation and maintenance of sustainable infrastructure and service any debt incurred to build it? What are the obstacles to taking advantage of the options?
How can planning academics and practitioners better approach the research and action needed to improve development finance for more effective sustainable development planning and climate action?

Citations

THE DELAYED GROWTH OF CHINA’S HEALTH IMPACT ASSESSMENT: DISENTANGLING CAUSES FROM DIFFERENT DISCIPLINES
Abstract ID: 18
Individual Paper

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Introduction: Health Impact Assessment (HIA) is a practical approach used to judge the potential health effects of a policy, program, or project on a population. In 2016, China purported to implement HIA to promote its nationwide “Health First” political campaign. A succession of rules, laws, and policies were developed to shape the political-administrative framework of China’s HIA, including Healthy China 2030, Law of the People’s Republic of China on the Promotion of Basic Medical and Health Care, and the 14th Five-Year Plan. However, these rules, laws, and policies are too broad to advise how to undertake an HIA at a local level. Since 2017, China has been undertaking HIA pilots in several jurisdictions with the purpose of informing the development of practical HIA guidelines. Nevertheless, as of January 2023, all the pilots were still ongoing and far from completed, moving at a significantly slower pace than other policy pilots in China. This raises the question of why HIA has been so slow to grow in the Chinese context. What can China do to further its HIA development? What obstacles does China need to overcome? By seeking answers to these questions, this article aims to inform Chinese policymakers as well as planning researchers whose scholarly interests vary from health impact assessment to governance and institution building in a volatile global economy that now places a high value on planning for public health.

Methods: We conducted 17, one-off, semi-structured, online (email/phone/video) interviews with Chinese scholars and officials from various disciplines who had direct or indirect experience with HIA. The disciplines include urban planning, public policy, public health, health law, environmental law, environmental sciences, ecology, mining and occupational health, and construction management. Four major obstacles were identified after we separately conducted a codebook thematic analysis using ATLAS.ti 22 to assure the objectivity and quality of qualitative analysis.

Findings: Four major obstacles are (1) Systemic distinctions between the Environmental Impact Assessment (EIA) and HIA that hinder replicating an EIA model into HIA practice; (2) Uncertainties in pollutant components and in establishing casual links between pollutants and health; (3) No law regulating HIA implementation; (4) Difficulties in developing a framework for cross-discipline collaboration. Several other obstacles, including funding availability, data quality, and capacity building, are frequently mentioned in Western scholarship, but these are not fundamental drivers of China’s delayed HIA growth.
Conclusion: The delayed growth of China's HIA prevents the country from quickly and widely refining its policies, programs, and projects to achieve public health goals. To address this, the paper offers several recommendations, including prioritizing HIA's role in decision-making rather than adhering to its scientific values, initiating HIA regulation or legislation at the city or provincial levels, developing matching mechanisms and technical guidelines with legislative and practical power, as well as encouraging multidisciplinary professional development. We believe that these recommendations can be used independently or in combination to overcome the four obstacles and will eventually speed up the development of China's HIA. We also hope that the recommendations can offer policy guidance to other developing and transitional countries as they navigate their public health policies.

Citations


Key Words: Health Impact Assessment, Governance, China, Public Health

PLANNING FUTURE GLOBAL URBANIZATION

Abstract ID: 61

Individual Paper

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The changing global demographics are expected to have more than 60% of the total global population in cities by 2050. The world has to start preparing for a large increase of urban population to be absorbed either in the existing urban areas or new cities. New urbanization trends should focus on absorbing the increasing global population without harming the environment; cities need to be sustainable, socially responsive, and economically efficient. The creation of new cities and the regeneration of the existing cities need to have a multiplicity of efficient planning concepts before an urban crisis threatens the world.

New cities around the world were historically needed for many reasons; for accommodating labor while building religious temples and pyramids in Egypt, for creating satellites around a Greek city when it reaches its size limit or to establish a government in a newly colonized area by a Roman army. However, most writings that we could find about ancient cities are usually citing “virtue” and good ethics as the basis for the city, in addition to reflecting the might of the state. “The Republic” is an example of “Plato’s” philosophy about the good world, it reflects political and ethical justice and its account of the organization of the ideal state. It did not propose a “form” for the city despite the discussed images about the sun and the cave and his idealism about the structure of the universe. That thought of virtuous idealism continued afterwards in utopian city concepts, that were not achievable.

Cities reflect the state of the economy, level of city residents’ interaction with the built environment, state of environmental integration, and state of political governance in their overall physical structure. Cities in different geographic locations and within different political, economic and social systems become clearly distinguishable based on their overall morphology, buildings’ shapes and scale, movement systems, etc. New capital cities had always been a special category of newly created and regenerated cities because of these cities’ need to reflect the image of the nation and its political themes, as they were always created for political reasons. Washington D.C. was inaugurated in 1847 and Canberra in 1913 as good examples of cities created to be the seat of federal
governments and to reflect the basic concept of the newly federated nations; democracy.

Cities such as Riyadh 1932, Chandigarh 1947, Islamabad 1947, Brasilia 1956, among others, were mainly created for political reasons while cities in China during the last two decades were clearly focused on demographic and economic reason. The issue for a more urbanized world and the global population increase puts a lot of pressure on all the nations to have efficient new and regenerated urbanization. However, some governments are using the opportunity to experiment with new urban forms that accommodate the population more comfortably, and sustainably while others are still wasting their wealth on politically motivated urban forms.

This research will discuss prevailing new urban trends as compared to regenerated urbanization to come up with best practices for future global urbanization. Cities like "the Line" in KSA, "Masdar" in the UAE, "New Administrative Capital" in Egypt, and "Panasonic" and "Fujisawa" high-tech cities in Japan will be among the urban models to discuss.

Citations

- UN, Department of Economic and Social Affairs, World Urbanization Prospects, the 2018 revision.
- Fujisawa, Towards a Sustainable Smart City, Takuro Yonezawa (Book Editor(s):Amal El Fallah Seghrouchni, Fuyuki Ishikawa, Laurent Hérault, Hideyuki Tokuda, Wiley Online, 29 July 2016, https://doi.org/10.1002/9781119329954.ch11

Key Words: Global, Sustainable, Smart, Urbanization, Capital cities

BUILDING INFRASTRUCTURE, BUILDING STATES: REVISITING POST-COLD WAR PEACEKEEPING THROUGH AN URBAN LENS
Abstract ID: 84
Individual Paper

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Infrastructure is an important object in studying United Nations’ peace operations as an institution and practice for the pursuit of peaceful coexistence in communities. Infrastructure scholars have pointed to the various imaginaries and usages of infrastructure to pursue politics, statebuilding and development. While UN Peacekeeping missions are involved in infrastructure building, and more broadly in socio-spatial planning, and significantly shape the built environment in their places of intervention, UN peacekeepers’ activities have been largely ignored within urban and planning scholarship.

In this paper, I revisit the UN’s spiraling involvement in statebuilding after the end of the Cold War, conducted through rehabilitation and reconstruction of public infrastructure. While much has been written about the UN’s de-facto trusteeship of states and their administration in peacekeeping studies, these interventions had a material base which remains neglected. How did the new concepts of ‘peacebuilding’ and ‘statebuilding’ materialize in public works infrastructure? How did the UN rationalize and also problematize this form of engagement?

Based on archival research on the UN’s involvement in Cambodia, the Balkans, Timor-Leste and Kosovo, this paper
suggests that contrary to common understanding, the peacekeepers’ practice was very much a continuation of logics we have seen prior to the end of the Cold War, based on the promise for betterment and state-building delivered through urban reconstruction and public works. In reflection of a global geopolitically shifting landscape, the reestablishment of urban services, settlement projects, and transport and communications networks as part of peace- and statebuilding, however, became increasingly subject to (urban) planning logics of economic growth and structural adjustment that determined the late years of the 20th century. At the same time, bureaucrats and planners were increasingly faced to compromise between competing temporal ambitions of quick impact and long-term development. The UN’s material, socio-spatial imprint in the communities of interventions started to grow, often with little sustainable impact, if not adverse effects, for the communities seeking peace and relief after years of conflict.

Citations

- Michèle Griffin and Bruce Jones, ‘Building Peace through Transitional Authority: New Directions, Major Challenges’, International Peacekeeping 7, no. 4 (1 December 2000): 82,

Key Words: infrastructure, reconstruction, statebuilding, peacekeeping, development

LESSONS FROM SCENARIO PLANNING TOOLS USED IN A GRADUATE-LEVEL PRACTICUM IN BOGOTA, COLUMBIA

Abstract ID: 115
Individual Paper

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There are currently new challenges in planning of global south cities resembling those of cities in the global north. Planners face contradictory interests, distrust, and lack of communication among stakeholders, such as policy makers, developers, community activists and environmentalists. Often, this unproductive dialogue has immobilized the debate and implementation of sustainable urban policies and projects. There are many examples of this stalled projects in our case study city, Bogotá, Colombia: a new transit corridor that cut across the wealthier parts of the city, or an urban expansion plan that includes affordable housing, but part of it is close to environmentally sensitive areas.

Academic research has proven that the introduction of innovative technologies in planning support systems (PSS) and scenario planning may help to improve communication among stakeholders. Immediate data analysis brings information to the table, ameliorating the quality of the dialogue and potentially helping to reach consensus among stakeholders. However, despite the technological advances there is still skepticism of the use of these new tools by planners, much of it caused by the inexperience working with them.

To cope with this challenge, we used in our graduate-level planning practicum an open-source urban planning scenario builder software, Envision Tomorrow (ET) developed in the United States. The purpose of using ET was contributing to the local participatory planning process, rapidly presenting to authorities and the different stakeholders several planning scenarios for a new city expansion and a new transit corridor with on-the-fly
indicators that allow their comparison. These indicators include topics such as mobility, urban form, real estate, and sustainability.

During 2021 and 2022, students developed different planning scenarios using ET, first for an 1800-hectare Master Plan in the northern outskirts of Bogotá, and secondly for a new transit corridor in the western metropolitan area. A first scenario presented a continuation of the growing trend of the city: a mix of unplanned formal and informal neighborhoods lacking infrastructure; other scenario, a development made of residential high-rise building compounds; and finally, a low-density neighborhood with single family housing. The objective of envisioning these scenarios was to improve the dialogue among stakeholders and facilitating a consensus about the urban form in the new urban areas. After the practicum, students were asked to fill in an online survey and to take part in a focus group to discuss the performance of these new tools.

Findings point first to a rising interest about implementing PSS in real life cases, students were able to formulate a Master Plan much faster and with more detailed indicators that when using traditional tools. Secondly, students with architecture backgrounds informed their proposals with indicators beyond aesthetics, and the use of PSS encourages them to explore more typological housing alternatives during their design process. Thirdly, in terms of the analysis of locally built landscapes, we found that sustainability indicators of settlements developed informally are in some topics better than those indicators found in formal developments. This puts into question the long-established view that cities in Latin America should incentivize the development of large mono-functional compounds with low-cost housing in peri-urban areas, instead of exploring other alternatives to cope with the affordable housing shortages.

On the negative side, students found the visual output of the scenarios very limited and complained about the lack of 3D rendering capabilities. Additionally, they also had software compatibility problems importing the ET scenarios to other planning and architecture software. Also, for them it was challenging to gather, build and understand the parcel-level data needed to work with ET.

Citations


Key Words: Planning Support Systems, planning education, scenario planning, Bogota

THE INSTRUMENTALIZATION OF CAPITAL IN LATIN AMERICAN REAL ESTATE MARKETS

Abstract ID: 127
Individual Paper

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While the relationship between space and the economy focusing on patterns, agglomerations, and participating forces has been under assessment for the past two centuries, a new factor has been introduced to spatial configurations, which is the financialization of the real estate markets. This factor has compromised the performance of urban planning instruments as the growing scale of capital investments persuades local
government officials to endorse large-scale operations, regardless of the environmental, spatial, and social impact they may have in the future. It is in the context of the complexity of the real estate market that we will analyze the impact of the factors of scale, agglomeration, competitiveness, and land use organization. The aim is to outline the elements, beyond the apparent efficiency of the market, that intervene in the formation of urban space, revealing the most important components of the spatial economy.

Among said components, transportation and communication costs have always had an impact on land prices, limiting access to education; cultural and recreational facilities; and job markets, all of which are highly valued by citizens. Another factor to consider is the oligopolistic and oligopsonistic dynamics that shape the real estate market, in which major developers are in the position to influence both the supply of and the demand for real estate. This is why urban land rent correlates to construction activity, land use restrictions, intensity of land use, and even land value capture instruments that may be in place in certain areas of the city.

An initial premise in the discussion is that there is a correlation between land prices and building densities, which follow predictable patterns produced by market forces that may determine the spatial distribution of the city. Consequently, the urban structure will be shaped by the real estate market, which, in recent decades, has integrated financial components that shape the economic principles of supply and demand. By understanding spatial economic models, planners could better predict both localization patterns and densities for the structuring of the urban landscape. Financial capital has unsettled the regular market dynamics that used to respond to the organic growth of cities and, instead, spatial transformations are a consequence of financial flows rather than real needs.

Privatizing public assets accelerates the circulation of capital in which there is a transfer of power from the State to the economic elites that, by using leverage-based techniques for investing, may drive the markets to financial collapse. The State played a crucial role in setting up the financial framework in which real estate transactions can thrive and attract global capital for investments, which include flexible regulations, loans and mortgages, grants and subsidies, as well as building infrastructure and extending basic services to the areas of intervention. Paradoxically, the availability of financial capital and credit increases land values, generating a self-fulfilling prophecy of ever-growing real estate appreciation, disregarding the actual demand. This appreciation in value leaves most of the population behind, producing gentrification, expulsions, and displacement, leaving centralities for those who can pay to live in them.

Financial capital has grown exponentially through digital flows and this has been a global phenomenon that is taking real estate as a vehicle to reproduce fictitious capital. This has important implications for cities’ governance since public policies are directed toward citizen’s welfare while finance aims to create value at any cost. Therefore, different rationalities are in place responding to divergent interests, and only through political commitment can regulations be put in place to guarantee a just, responsible, and inclusive city.

Citations


Key Words: Financialization, spatial location, real estate, fictitious capital, spatial economy
Urban transformation in coastal towns stimulates country's economic progress by leveraging and promoting climate-resilient infrastructural development. However, this infrastructure-led transformation tends to sustain the continued centralized colonial economic growth, which often accommodates 'elite' groups of the society but leaves marginalized communities in peril (Wilkens & Datchoua-Tirvaudey, 2022). The notion of such urban transformation ignores critical questions like 'what leverages such development,' 'who gets to decide what development is necessary,' and 'development for whom' and consequently causes infrastructural violence in the community (Rodgers & O'Neill, 2012). Grounded on intersectional subjectivity (Eriksen et al., 2015), this study intends to explore such critical concerns associated with the existing practice of urban transformation. The study will use Mongla, a port town in southwestern coastal Bangladesh, to investigate the following questions.

What is the mix of actors and institutions that influence climate-resilient infrastructure development?
What are the sociopolitical and environmental implications of such development?
How can local knowledge be mobilized into climate-resilient development initiatives? The port town of Mongla, situated partway between Dhaka and Calcutta's emerging economic development corridor, has been experiencing rapid urbanization, despite its coastal location. Over the last decade, this town went through enormous development initiatives to accelerate the country's economic growth. These initiatives include establishing Export Processing Zone (EPZ) improving port infrastructure, building embankments, walkways along the river, and public parks. Is the town demonstrative of inclusivity and climate responsiveness? Or do elites’ initiatives provide the narrative framings for towns to repackage traditional developmentalism in new global green discourse?
Conceptualizing intersectional subjectivity in this regard will unfold how individuals perceive such infrastructural development and their relationship with the urban transformation in Mongla. Intersectional subjectivity exhibits multifaceted and dynamic interaction and intersection among multiple social and cultural factors, such as race, gender, age, religion, class, sexuality, and ability. The idea of infrastructural violence coupled with intersectional subjectivity can better articulate the contexts of multidimensional inequality and injustice by delineating who is benefited and who is not from development interventions.

To address such inequality aspects and examining the research questions, the study will employ a photo-elicitation and storytelling approach, key informant interviews, and focus group discussions (Erfani, 2021; Moore et al., 2008). This research method involves using photographs to prompt individuals to tell stories or provide insights about their experiences, beliefs, and attitudes. In this method, first, the researcher will capture photos of the development intervention and the surrounding areas in the study region. Second, key informant interviews and focus group discussions (FGDs) will be conducted using the photos to select the appropriate picture demonstrative of the development interventions and collect narratives, such as stakeholder engagement, decision-making process, and socioecological implication, of each intervention. Key informant interviews will include community people, local government officials, international NGOs, and development partners working on the case study area. FGDs will be organized with marginalized community members.

Infrastructure-led urban transformation in Mongla significantly influences the country's economic progress. To ensure just transformation, such development must be inclusive and aware of how individuals' subjective experiences and perspectives make sense of their social and physical environments related to urban transformation. Photo-elicitation and storytelling can visually represent the urban environment, allowing participants and researchers to see and understand the spatial relationships between different elements of the built environment. This method will capture the narratives of each development intervention through the participants' stories. Such a method will provide a platform for marginalized communities to raise their voices to
construct their own narratives about urban transformation initiatives and to join in a policy dialogue, which is a step toward inclusivity in the development policymaking process.

Citations


Key Words: Climate-resilient development, Urban transformation, Intersectional subjectivity, Infrastructural violence

INFORMAL SETTLEMENTS: THE INFLUENCE OF SOCIAL NETWORKS ON THE SPATIAL ORGANIZATION AND LIVELIHOOD ACTIVITIES OF URBAN INFORMALITY IN ACCRA, GHANA.

Abstract ID: 148
Individual Paper

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Major cities in sub-Saharan Africa are facing an uncomfortable truth: residents of traditional informal settlements who have been relocated - forcibly or voluntarily - to formal housing are not faring much better - socially and economically - than the residents left behind. Concurrently, despite decades of financial investments and efforts to rehouse residents of informal settlements, cities in sub-Saharan Africa continue to see an increase, rather than a decrease, of informal settlements (Boamah & Amoako, 2020; World Bank, 2021).

However, scholarly literature and journalistic discourse around urban informality tends to reduce its complexity to the singular theme of a lack of affordable housing. As a result, current policies focus on providing “affordable housing” including upgrading and new development initiatives as the solution. These policy approaches ignore the fact that while informal settlements begin as a consequence of a lack of affordable housing options for the urban poor, the end result of their spatial organization is often driven by the dependence of its residents on their social (political, livelihood, familial, and friendship) networks (Huchzermeyer & Karam, 2007; Roy, 2012; Smit, 2007; Watson, 2002). The purpose of this research is to answer two questions regarding social networks: (1) What is the influence of social networks and livelihood activities on the spatial organization of traditional informal settlements? And (2) How are social networks and livelihood activities impacted by the relocation of informal settlement residents? Using mixed-methods, I examine two case studies in Accra, Ghana: Agbogbloshie/Old Fadama, a long-standing informal settlement in the city of Accra, and residents of Adjen Kotoku, a newly developed community where some residents of Old Fadama had been recently relocated. Data collection consisted of an in-person survey conducted with residents in Agbogbloshie (n=109) and Adjen Kotoku (n=114). One focus group was also conducted with 15 residents in each location. Finally three municipal officials responsible for planning decisions within the
My findings illustrate how residents of informal settlements, composed of myriad cultures, come together to create a sense of place which is often overlooked in upgrading and other housing policies. I outline the essential ways that social networks shape the livelihoods of residents and the built environment of informal settlements, suggesting more effective urban policies that can ease the transition of informal settlement residents into new or improved housing. Acknowledging and including more culturally and place-sensitive strategies in addition to other planning and housing policies, I argue, will mitigate the proliferation of informal settlements in sub-Saharan Africa.

Citations


Key Words: Traditional Informal Settlement, Social Networks, Affordable Housing, Sub-Saharan Africa, Planning Policy

GREEN SPACE AND RESIDENTS' HEALTH: THE ROLE OF COMMUNITY SECURITY IN URBAN CHINA

Access to green spaces has been widely acknowledged to promote physical and mental health. However, the positive effects of green spaces on health can be undermined by inadequate community security. Crime and insecurity can discourage individuals from utilizing green spaces, thus limiting their potential health benefits. While previous studies have explored this hypothesis in American and European cities, little research has been conducted on whether these findings apply to urban areas in China. To address this knowledge gap, we conducted a nationwide survey using the China Labor-force Dynamics Survey, examining how community security affects the health benefits of green space in 229 urban communities with 24,899 observations.

We measured community green space using park and greening coverage (reflecting overall green space volume) and community security by residents' experience of crime and subjective perceptions of community safety. Using a hierarchical linear model, we found that community greening coverage was positively associated with residents' health in China, consistent with previous evidence. Additionally, community security was positively associated with residents' health. Stratification analyses revealed that residents who had experienced crime did not obtain health benefits from overall green space volume, and their health might be negatively affected by parks. However, for those who had not experienced crime, greening coverage was positively related to health, although the benefit was marginal for community parks. Both measures of green space had little effect on residents' health in...
subgroups of safety perceptions, including feeling safe and unsafe.

Our study contributes to the existing literature on the role of community security in the relationship between green space and health by providing nationwide empirical evidence from China. The results suggest that urban planners should invest in safe communities to support the use of green space as a means of promoting better health outcomes.

Citations


Key Words: green space, Self-rated health, community security, urban area, subgroups

WHAT FUTURE FOR KOLKATA METROPOLITAN AREA'S JUTE MILLS IN LIBERALIZING INDIA? UNDERSTANDING SENTIMENTS TOWARD REDEVELOPMENT

Abstract ID: 211
Individual Paper

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This paper examines the prospects for Brownfield development of former jute mills in Kolkata, India. The jute industry, once a vital part of the colonial capital city's economy, has experienced a steady decline in post-independent India, leaving many of the mills abandoned and deteriorating. Despite the challenges of neoclassical economy, there is potential for the historic jute mills to be redeveloped for a variety of purposes, including housing, commercial use, and cultural heritage preservation. The study seeks to understand the perceptions of various stakeholders regarding the future of the industrial heritage and the potential for mill redevelopment. Using a qualitative approach, the study collected data from a range of stakeholders, including mill workers, owners, architects, heritage conservationists, and former mill residents. Semi-structured interviews were conducted using tailored questionnaires, and a snowball methodology was applied to identify potential stakeholders. The findings of the study indicate that the jute industry is facing significant challenges, including supply and demand-side issues and a lack of government support. However, there is cautious optimism among mill owners about the industry's future, particularly if there is increased consumer demand for environmentally friendly products. The physical quality of the mill sites varied, with some in good condition and others in a state of disrepair. There is broad agreement among stakeholders that these sites have potential for redevelopment, but there are significant barriers to realizing this potential, including regulatory challenges and the need for significant investment.

The study highlights the need for a coordinated and comprehensive approach to brownfield redevelopment, one that takes into account the perspectives of various stakeholders and balances economic, social, and cultural considerations. The findings suggest that there is potential for these mills to be repurposed in a way that benefits
both the local community and the wider city. However, significant challenges must be overcome if this potential is to be realized. The study concludes by offering recommendations for policymakers and other stakeholders interested in promoting the sustainable redevelopment of former jute mills in Kolkata.

Citations


Key Words: brownfield redevelopment, neoliberalizing India, industrial heritage, jute mills, Kolkata

REGIONAL PLANNING AND AGGLOMERATION: CASE STUDIES OF POWER CENTRALIZATION AND DIVIDING CITIES AND SOCIETIES IN KAZAKHSTAN

Abstract ID: 246
Individual Paper

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Kazakhstan’s cities suffer from exacerbated uneven development, sprawl, and inadequate transportation networks (Ilyassova, Kantakumar, and Boyd, 2021). Urban centers remain important spaces for employment, however cities are increasingly unaffordable leading to increased rural to urban traffic and pollution (Seitz, 2021; Bakytzona, Kopylov, Dal and Satekov, 2016). Agglomeration, the process by which cities and surrounding areas are merged into singularly governed entities and territories, is being implemented around the country to overcome regional development and connectivity issues (Junussova, 2020). This paper aims to address how these agglomeration problems address issues requiring remedy by regional development and planning. Case studies have been constructed of Kazakhstan’s three most populous agglomerations drawing upon qualitative data collected between 2019 and 2022. Results indicate that regional planning is producing culturally and socio-economically divided regions in Kazakhstan. While agglomeration consolidates governance, in practice, it fails to address regional issues; new development in under-inhabited spaces is prioritized and funded over rehabilitation and connection of existing neighborhoods. Plans are created and implemented by those favoring global urban aesthetics over cultural and historic preservation deepening socioeconomic and ethnic divides in Kazakhstan’s cities. Further, regional agglomeration deepens political centralization within this centralized authoritarian state, undermining professed strides towards liberalization and democratization. While regional governance is consolidated and civil servants are eliminated, agglomerations become hubs of economic development and investment, supported and controlled by the state sovereign fund.

Citations

In 2015, the floodwater in Accra, Ghana, resulted in over 150 lives lost. A diagnostic report was sequentially performed and led to the adoption of the Greater Accra Resilient and Integrated Development Project (GARID) in 2019, with the fund from the World Bank for its operation. A feeling of déjà vu would occur upon knowing that the Bank had supported several international development projects across Ghana in the 80s and 90s. However, the sophisticated challenges remained and deteriorated, like the growing informal dwellers, and led to GARID. This time, resilience development 2.0 (as opposed to the earlier projects) was framed in an integrated manner that seeks to holistically improve flood risk management and the informal dwellers’ access to basic infrastructure and services with extensive participation.

Although GARID is arguably the most dominant project happening on the ground in this African city, this research dwells on if it is the only solution needed, given that different formats of limitations might confine the approachable resources and alternatives to countries like Ghana. On that note, a sense of global inequality would be derived from studying the evolution of GARID. This notion stirs up questions like (1) what future urban imageries might be for a coastal city tangled with regional resilience enhancement in the global south and (2) whether the recurring international development model raises concerns. Observing the development of GARID hence helps understand how the latest global south resilience effort is demonstrated on the one hand and enlightens chances of reflection toward such a development model on the other hand.

This paper develops a case study based on the story of GARID to provide exploratory insights in response to the above questions. It derives information from public documents and in-depth interviews with stakeholders, including the Bank, officials, and scholars. In doing so, the paper illustrates how the latest development and planning model of global south resilience building has shifted from the previous practices and highlights the other vital southern planning issues that must be proactively considered. The results reflect that extensive planning techniques and considerations have been learned and performed over stakeholder engagement. Nevertheless, participants argue that ensuring fiscal sustainability (beyond the Bank) to support the other contingent projects/programs after GARID is a noticeable challenge.

The structural issues embedded with GARID, which this paper points out, help planners and policymakers better apprehend the gaps between theory and practice touching on resilience, informality, poverty, inequality, and governance across cities sharing similar urban settings with Accra.

Citations
BETWEEN METROPOLE AND COUNTRYSIDE: DELHI’S HIGHWAY WEDDING VENUES

Abstract ID: 387
Individual Paper

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Extravagant commercial wedding venues that have emerged along highways around Delhi and its surrounding smaller cities, towns, and villages are indexes of a decentralizing form of urbanization and economic growth entangling metropole and countryside. Tracing these sites’ assemblies reveals that they are semipermanent structures imitating a montage of indigenous and internationally circulating images of iconic architecture and other destinations like European Palaces, famous international cities, and Bollywood mise en scène. These venues are made of a variety of regionally sourced flexible materials like cloth, steel, bamboo, and fiber-glass using guilds of migrant labor organized by tent vendors on rentable empty land, farm houses, or in more formal hotels and convention centers. These temporary sites respond to the surge in rituals and related consumerist practices in the city during the majority Hindu communities wedding season in North India. This analysis also reveals that these sites emerged from a tradition of tenting and “pandals,” i.e., temporary ritual structures that were used to conduct wedding rites located between the bride and groom’s rural family homes.

In this paper I discuss how the highway wedding venue emerged as a potent post liberalization urban form across various scales of urbanization in India. Using the works of Srinivas and Kolenda, I show how the wedding and its migrant labors’ rural caste-based kinships networks operate across regions. I further demonstrate that these regional networks are ubiquitous across various scales of human settlements and influence their urbanization. Building on Glover and Legg’s work, I argue that the secular city, the State, and its colonial history also played roles in the production of this industrial ritual typology through the marginalization of the subject and its indigenous practices and spaces—especially those associated to the countryside. I discuss how the wedding venues’ highly flexible, scalable, and mobile forms result from negotiations between secular metropole and private indigenous spaces. Furthermore, as the post liberalization State withdraws from conventional urban planning, it deploys new privatization-friendly governance models and highways that ironically tap into marginalized indigenous networks of private production and consumption. In sum, I relate the powerful hybridity of the urban and architectural form of wedding venues dispersed across city and country to negotiations among ritual and caste-based practices and private consumption, regional labor guilds, and metropolitan networks of design, and management.

Citations


Key Words: Highway, Urbanization, Weddings, Metropole, Village

RECKONING THE URBAN: RETHINKING THE POLITICS OF URBAN PLANNING IN SOUTHEAST ASIA

Abstract ID: 391

Individual Paper

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Predominant frameworks for analyzing the politics of Southeast Asia’s rapid postcolonial urbanization have generally focused on the ways that these politics were shaped by the period of accelerated integration into global supply chains and circuits of finance since the mid-1980s, during which state planners have sought to enable globalization-driven economic development and corporate capital accumulation. This paper asks: How might a different temporal frame that focuses attention on the turbulent period of Southeast Asia’s ‘hot Cold War’ transform our understanding of the contemporary politics of urban planning? During the years from 1965 to 1975 in particular, the US war in Vietnam and the ‘China scare’ led to a concerted US military and political push to ensure continued influence in the region. During this period, Indonesia, the Philippines, and Thailand saw the emergence of US-supported authoritarian governments that systematically used the manipulation of the law and political institutions, control of knowledge production, and selective use of sometimes extreme violence in the name of anti-communism, to consolidate state power. This paper argues that the explosive urbanization that began in the mid-1980s must be understood from the perspective of this earlier period, as urban planning agendas were shaped by the interests of these regimes, which sought to capitalize on the massive value created by urban transitions to bolster their political and economic control. The paper introduces the concept of ‘reckoning the urban’ as a frame to understand the ways that contemporary political contestations around planning agendas across the region center on debates about the legacies of ideologies that emerged during the Cold War. These ideologies rationalize the threat of state violence, control of knowledge production, and the repression of certain groups based on categories of gender, class, and ethnicity, as necessary to achieving (state defined) goals of national progress. The paper is based on a review that brings together literatures on Southeast Asian urbanization, revisionist postcolonial historiography of the region, and theories of racial capitalism and racial reckoning.

Citations


WHAT GAVE RISE TO CHINA'S LAND FINANCE?
Abstract ID: 420
Individual Paper

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The first two decades of the 21st century witnessed an unprecedented development of China's city regions, most of which are buttressed by massive infrastructure development. While it is widely accepted that the land finance practice, or tudi caizheng, helped local governments capture land value for infrastructure development, few studies explain how such an institutional innovation took shape.

Taking the historical institutionalist approach, this study systematically examines the origin of China's land and infrastructure development institutions. Borrowing the process tracing method and semi-negative case studies from political science, this study observed the emergence and evolution of China's 37 city regions' land and infrastructure development institutions. With broad data sources of government archives, statistics, commercial reports, and interviews, it concludes that land finance practices are determined by four factors, i.e., the central government's policy, the local government's development strategy, the local government's administrative reform, and compliance of land stakeholders such as peri-urban peasants and state-owned enterprises. This study also provides insight into the cross-city-region differences in China's land finance practices.

The discovery of this study challenges the conventional belief that China's land finance practice is a by-product of fiscal-federalist reform. Instead, it stems from enduring and meticulous central policy-making, local strategy-making, and administrative reform efforts. This study highlights that public landownership alone cannot enable state land value capture. It will provide new references for developing countries in Asia and other parts of the world to make urban development policies.

Citations


Key Words: land value capture, China, land finance, historical institutionalism

PLANNING FOR INCLUSIVENESS: PARTICIPATION, COMMUNITY ENGAGEMENT AND THE ETHICS OF CARE IN PRECARIOUS SETTLEMENTS OF RIO DE JANEIRO, BRAZIL
Abstract ID: 438
Individual Paper

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This paper aims to reflect on the challenges for planners and grassroots groups in a post-pandemic context in favelas in the city of Rio de Janeiro, Brazil. It also intends to explore the issue of inclusion as it relates to
participation, community engagement and the ethics of care. During the outbreak of the COVID-19 crisis, themes such as the quality of housing and the urban environment, as well as care as a public policy, gained a criticality in the debates about planning policies. The crisis had a significant impact on vulnerable low-income communities in many parts of the world. In the face of such an emergency, local community groups quickly organized themselves and established solidarity actions across their territories to help vulnerable residents to cope with the pandemic crisis. Different social solidarity practices emerged offering diverse types of services. The appearance of these groups can be partly explained by the difficulties of the State to meet the urgent needs of these communities and the growing sense of solidarity in the face of this unpredictable public health crisis. These local groups used the Internet, social networks and virtual media to organize volunteers and gather financial and material resources. Some solidarity initiatives emerged from existing local community groups and others were formed during the outbreak of the COVID-19 pandemic. Based on solidarity, empathy and the ethics of care, these groups added a new dimension to community engagement and local governance. Once the emergency of the sanitary crisis ended, several grassroots groups started to engage in other activities. This paper intends to investigate the continuity of practices of participatory planning and solidarity actions in a post-pandemic context in three slums in Rio de Janeiro, Brazil (Favela da Rocinha, Pavão-Pavãozinho/Cantagalo and Babilônia/Chapéu Mangueira). This paper uses empirical evidence from the three favelas and articulate it with theories about grassroots practices and engagement, approaching the issue of participatory planning from the perspective of the ethics of care and social justice, particularly from feminist studies (Fisher; Tronto, 1990; Forester, 2020; Jon, 2020; Lefebvre, 2014). The research methodology uses remote mapping and digital ethnography, including information gathered from social networks, community websites as well as different kinds of media and online platforms. Field research and ethnographic data gathered in these communities complemented the empirical research. The preliminary results show that most solidarity initiatives and practices after the pandemic deals with daily demands of the communities such as health and education, child care and jobs. However urgent issues such as violence against women, sewer infrastructure and revitalization of public green areas mobilize different groups. The paper contributes to instruct planning theory, practices and public policies in issues concerned with grassroots participatory planning. It supports the argument that community groups and dwellers of favelas are socio-spatial groups that produce knowledge and are capable of solidarity action in emergency situations, when the State fail to act promptly. It also reinforces the importance of bottom-up collaborative planning in the struggle for social justice.

Citations


Key Words: grassroots planning, community engagement, solidarity initiatives, ethics of care, participatory practices

A NEW REPUBLIC OF NGOS? EVALUATING THE URBAN PLANNING IMPLICATIONS OF POST-BLAST NGO-LED RECOVERY OF BEIRUT

Abstract ID: 478
Individual Paper

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August 4th, 2020 will remain a painful memory for the Lebanese and a scar on the urban landscape. On this day, a massive explosion occurred in Beirut's Port, causing irreparable damage to the surrounding neighborhoods. The ignition of 2,750 tons of improperly stored explosive Ammonium-Nitrate killed over 200 people, left 6,000 individuals wounded, damaged 300,000 homes and affected numerous livelihoods (Habitat for Humanity, 2020). Considering the widespread condemnation of Lebanon's corrupt leadership and its long history of being a politically fragile state, donors decided to manage relief efforts without the involvement of the government by giving money to non-state entities. Resultantly, international, local Non-Governmental Organizations (NGOs), and civil society actors took the lead in the recovery.

This study examines how reconstruction occurs in a politically divided city with a weak central government. Specifically, I investigate the role of NGOs in Beirut's post-blast recovery and the effects of varying levels of NGO funding, capacity, expertise, and coordination on the long term recovery of urban neighborhoods. I also consider how the outsized role of NGOs impacted the rebuilding of local government capacity and authority to plan.

My analysis is guided by research that considers how funneling aid through NGOs can prompt or prolong limited government capacity (Kristoff & Panarelli, 2010). Ghani et al (2005) suggest that during a crisis, this international aid recovery system facilitates dependency on NGOs that leads to “higher cost structures and the creation of unsustainable and unaccountable practices” (p.11). The recovery response efforts in the aftermath of the 2010 earthquake in Haiti exemplifies the failures of humanitarian aid that rendered the island with the label the “republic of the NGOs”; it showcases how the current system of international aid traps millions of people in cycles of dependency (Katz, 2013).

I examine Beirut’s post-blast recovery using mixed methods, including document review, semi-structured interviews, and a walking survey to gather my data. My document review focused on an analysis of public records outlining current housing and recovery policies in Lebanon published by UN-HABITAT, the Council for Development and Reconstruction, and a Lebanese government agency, the Public Corporation for Housing amongst others to identify recovery practices. I conducted seven interviews with NGO leaders, policymakers, and urban researchers to better understand their roles in and perspectives on the recovery process. Additionally, I conducted a walking survey in the blast-affected areas to document the quality of repairs being made and the building materials used.

The results of the study highlight the difficulty of leading a city-wide recovery when there is no centralized leadership. The absence of coordination between NGOs, the inter-NGO competition for scarce funds, and the varying levels of expertise and capacity were made visible via: duplicated needs-assessments, short-term recovery interventions, varying quality of building rehabilitation, and absence of urban recovery at the neighborhood-level. I demonstrate how the reconstruction strategy favored investing in the rebuilding of tourist areas beyond pre-blast conditions while bypassing more damaged low-income neighborhoods, creating unintended effects, including increases in rent prices, gentrification, and displacement.

I end by offering recommendations for the post-recovery processes in Beirut and broader implications for disaster planning, international aid and planning in divided cities. I argue that a proactive strategy is needed to structure how aid is funneled in times of crises to ensure that it becomes a tool for long-term sustainable development, government capacity building and an instrument for structural reform, not a reactive, short-term fix. The goal should be for non-state actors to play a supporting role. Lastly, to achieve a community-based urban recovery, there is a dire need for fostering a culture of participation that engages residents in reconstruction processes to reduce unintended impacts.

Citations


Key Words: Disaster Planning, Urban Recovery, Divided Cities, Non-Governmental Organizations

ANTICIPATION EFFECTS OF THE FIRST LINE OF THE METRO PROJECT OF BOGOTA ON THE REAL ESTATE MARKET

Abstract ID: 501
Individual Paper

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Studies of the impacts of mass rail transport systems on land and real estate prices in the real estate market are scarce in the Colombian context. Most studies have focused on studying the impacts of bus rapid transit mass transit systems known as BRT (Bus Rapid Transit), with a greater concentration of studies in the case of the city of Bogotá. Although there is an emerging literature in the study of the impacts of rail systems on urban development in Medellín, there is a gap in the literature regarding the impacts of the announcements of the project of the First Line of the Bogotá Metro PLMB in the urban development of the city. This article conducts a study of the anticipatory effects of the PLMB project on the city’s real estate market. Through a difference-in-difference statistical model, using a hedonic price model with control variables that incorporate attributes at different scales, the article estimates effects on prices and on the built area of real estate market projects in the city. The results of the analysis suggest that the regulations implemented by the city establishing an 800-meter impact area along the future PLMB project line have had an effect on the real estate market supply in terms of property prices, the number of housing units offered as well as generating a more compact urban form. Although both the regulation of land use in terms of defining an area of influence as well as the investment of the PLMB project are of a public nature, the private sector has been able to capitalize on the announcements through anticipatory effects associated with the project. Based on these findings, the article provides guidelines for future research on the impacts of the PLMB project as well as public policy recommendations for local and national government regarding the value capture opportunities associated with the announcement of large scale urban transport projects and equity issues in terms of the challenges in terms of affordable housing provision close to rail-based systems.

Citations


Key Words: Metro, land use, real estate, value capture, transit-oriented development TOD
FROM CRISIS-RESPONSE TO INSTITUTIONAL-CHANGE - UNDERSTANDING HOW THE PANDEMIC AFFECTED GOVERNANCE IN JHARKHAND, INDIA

Abstract ID: 508
Individual Paper

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In 2020, as COVID-19 spread worldwide, communities had to formulate a rapid response to protect themselves from a poly-crisis that impacted public health, economies, social support systems, and more. In particular, the pandemic highlighted and exacerbated the everyday precarity of populations like migrant workers that have long been marginalized. This paper maps the journey of a disaster response system – Jharkhand State Control Room (JSCR) - that emerged in Jharkhand, India, to support more than a million migrant workers who were adversely affected due to the pandemic and associated lockdowns. What makes JSCR unique is its hybrid nature, where a civil society-led, state-based organization collaborated with indigenous groups and traditional networks to create a system that utilized their attributes to deliver support to those in need. To provide this support effectively, JSCR leveraged the plural perspectives of its civil society partners, invoked the built-in trust for traditional and indigenous organizations among vulnerable groups, and utilized the inherent reach and power of the state apparatus. Iteratively, it created new processes and institutional structures meant to support marginalized populations on a very compressed timeline. Using JSCR as a case study, I ask if the pandemic and resultant response systems have led to substantive, possibly long-term, institutional change (Healey, 2005) that centers on social safety nets for the most vulnerable communities.

Based on two years of extended engagement with the JSCR and mixed methods, I draw on insights gained from embedded ethnography in 2020 during the nationwide lockdown and follow-up fieldwork in 2022 for this paper. I also derived evidence from 105 semi-structured interviews from the stakeholders, including JSCR workers, involved state officers, NGO leaders, indigenous and grassroots workers who collaborated with JSCR, and a randomly generated list of migrants who registered with the JSCR for aid. In addition, I also conducted two phone-based and digital surveys. One involved 500 migrants who registered for aid, and the second collected forty responses from frontline JSCR workers. Finally, I also drew on document review, including daily reports sent to the state and the various JSCR internal reports on funding, impact, and implementation to write this paper.

My findings reveal how the JSCR acted as a catalyst for substantive changes in the support systems for migrants, including the creation of an inter-state embassy and an intra-state organizational framework for migrant registration, contractual aid, and advocacy. Further, in the tradition of learning by doing, these reflective practitioners at JSCR created new processes that leverage plural networks, social media, and geo-location (Schön 1995). These processes and additional infrastructure provide transregional informational support, rescue, and advocacy support to the migrant workers who found limited aid outside their home villages. I highlight the tactics this team of civil society workers, the state, and indigenous networks used to address the situation and assist those in immediate precarity collaboratively. Further, using the lens of practical authority (Abers, 2013) and policy sustainability (Patashnik, 2014), I examine how the JSCR is fundamentally changing embedded institutions through the new knowledge gained by advocating for new legal frameworks, policies on migrant protection and new organizational frameworks.

Citations


Key Words: Crisis response, Institutional hybridity and change, Collaborative governance, Policy sustainability, Migration

UNDERSTANDING DISPLACED PERSON’S PRIORITIES FOR EFFECTIVE CITY SERVICES AND INFRASTRUCTURE IN JUBA, SOUTH SUDAN
Abstract ID: 513
Individual Paper

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Increasing numbers of people are being displaced worldwide due to political conflict and climate change. The traditional encampment approach to housing displaced persons is no longer effective as about 60% of these individuals choose to reside in urban areas. This creates a mismatch between where aid is being given and where it is required. Displaced persons in low-income countries can offer development opportunities for under-resourced cities and governments, but planning effective urban programs and facilities requires a better understanding of the needs of the displaced and their impacts on the host communities. While some research has explored how refugees meet their needs in the traditional encampment approach (Alix-Garcia et al. 2016, Berke & Larsen 2022, Bilgili et al. 2019 & Taylora et. al. 2016), there has been little research on how displaced persons fare in cities. Furthermore, we don’t know whether the impact on well-being varies between displaced persons and host communities living together in urban areas (Betts et al., 2019).

I adapt Betts et al., (2019) migration economic framework to study refugee self-reliance in Uganda I use a similar framework to compare displaced persons and existing residents living in four urban “neighborhoods” in Juba, South Sudan. This paper aims to better understand if displaced persons prioritize different public goods and services compared to the host residents. To answer this question, I surveyed 60 households in four neighborhoods (n=240) in Juba, South Sudan. I also conducted document reviews, participant observation in markets and neighborhoods, and semi-structured interviews with UN agency officials, district government officials, local authorities (chiefs, etc.), and other service providers working in and around the sites of observation.

The initial findings highlight that over 72% of host residents suggested that the arrival of displaced persons either had neutral (28%) or positive impacts (44%) on their households. While both host and displaced residents indicated the cost of transportation as a barrier to income generation, hosts were more likely to prioritize roads. Both host and displaced residents prioritized schools and health clinics, and hosting populations perceived the arrival of displaced persons as having positive impacts on education services (e.g., the arrival of displaced persons gained the attention of development actors such as UN agencies who aimed to fill existing education gaps).

Urban planners in the global south need to prepare for the influx of displaced persons into cities and consider strategies that cater to both host communities and newcomers. Effective urban programs and facilities can only be designed if community dynamics are understood. The aim of my research is to identify opportunities and obstacles for displaced persons in cities and pave the way for better urban policies and research.

Citations
The objective of the study is to propose disaster management models based on the dynamics between government and civil society. The study ultimately aims to provide insights into the different perspectives of decision-makers and marginalized communities. This study particularly focuses on flood management. Governments employ various policies and strategies to mitigate their effects. These policies do not always align with the needs of the affected communities leading to social inequity and further marginalizing vulnerable groups that live in low-lying areas.

The Philippines is one of the world's most disaster-vulnerable countries to floods, storms, and earthquakes (World Bank, 2017). In this sense, this research investigates the different approaches used by the Philippines government and various organizations to deal with flooding to identify how their interventions have affected marginalized communities. Only some studies, however, depict comprehensive models regarding who initiates flooding mitigation. To address this issue, the proposed research will present three disaster management models in terms of the relationship between government and civil society. The three models are: 1) government-centered, 2) collaborative government-led initiatives, and 3) civil society (or community) initiative models.

In the first model, based on the government's forced relocation plan, the relationship between the government and the community is vertical. It is not easy to find community participation in the policy process. The consequences of forced eviction often leave people homeless, landless, and impoverished, further marginalizing vulnerable groups within society (UN Habitat, 2014). The more problems would be that each negative issue is interconnected (Coppola, 2015).

The second model still presupposes government intervention, but the community and the government show a horizontal relationship in the policy process. This is consistent with Iuchi’s (2014) study arguing that the government must adequately consult with affected populations in decision-making. 'People’s plan' was taken as a case. This plan considers both professional recommendations and community conversation (Erickson, 2017).

The last model emphasizes the community's self-sustaining efforts in disaster situations. We took an example of Buklod Tao and illustrated it. Instead of moving to another place in the event of a disaster, they are choosing to prepare for a disaster and develop their ability to recover on their own in a disaster situation by organizing...
community-based groups. The government plays a role in assisting the community's self-support.

The research conducted a case study to investigate the different approaches used by the Philippine government and various organizations. Data are taken from a variety of sources, including interviews, field observations, newspaper articles, relevant web pages, and journal articles. Qualitative methods were used as they allow for capturing these dynamics in rich detail. Each district reflects unique political and social contexts, making it important to capture the nuances of each context.

Our research offers a practical framework for disaster management sensitive to marginalized community's needs. Flooding is a common problem in many countries, and our framework can serve as a tool for addressing flooding and other disasters. The three models provide options for planners when developing disaster management strategies. This framework can be applied in other countries facing similar challenges. It also offers a unique "views from below" perspective, supplementing available information with insights from the affected communities. This could also help to address social inequity and marginalization, ensuring that vulnerable groups are not further disadvantaged by disaster events.

This study contributes to social equity scholarship by advancing the idea of a “view from below” and illuminating how it differs from a more typical expert view from above. We hope that our study will help policymakers consider marginalized communities' perspectives and help achieve social equity in the planning process.

Citations


Key Words: Urban flooding in the Philippines, Government-centered model, Collaborative government-led initiatives, Civil society (or community) initiatives, Views from below

THE INTERSECTION OF URBAN INFORMALITY AND CLIMATE CHANGE IN THE DOMINICAN REPUBLIC’S OZAMA RIVER BASIN
Abstract ID: 535
Individual Paper

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Urban informality puts many in the Global South at even greater risk of climate change. The proliferation of informal settlements in Latin American and Caribbean (LAC) cities has resulted in stark spatial and social fragmentation. Informality will expand as world population, urbanization, wealth inequality, and cost of living continue to increase (Butera et al 2016). The purpose of this paper is to explore how climate change interacts with and exacerbates urban informality in coastal contexts and to look at the Ozama River basin as a case study. The
Dominican Republic and its capital, Santo Domingo, are amongst the most vulnerable places to climate change. The Ozama River, which bisects the capital before emptying into the Caribbean Sea, is home to 400,000 people living in slum conditions (de la Rosa, 2018).

To explore these issues, a literature review on environmental threats to informal settlements explains the unique combination of threats faced by these communities. Then, archival research methods are used to investigate and analyze how various institutions in the Dominican Republic have included the communities alongside the Ozama River when trying to plan and implement solutions to these unique and intersecting threats. The authors find that the Dominican government has predominantly used the environmental and socioeconomic threats that these communities face as an opportunity to relocate and evict current residents for the purpose of pursuing economic development - development which fails to account for the needs and desires of the evicted. In so doing, the government prioritizes economic gain over the livelihoods of evicted residents.

This research is important because although informal spaces are continuously demonized and marginalized, they can be viewed as a phenomenon of reclamation of rightful space and resistance to Western models of urban development (Simone, 2004). We argue that instead of completely removing or modernizing these areas risking the disruption of the resident’s lives, LAC countries could take advantage of the opportunity to implement bottom-up community-focused initiatives. Some interventions along the Ozama River, such as La Nueva Barquita, have had a focus on providing social programs and community spaces for the relocated, which has made it more successful than other projects. Public engagement needs to be a central part of planning around informality to protect and prioritize residents’ quality of life and livelihoods.

Citations


Key Words: Urban Informality, Community Engagement, Climate Change, Latin America

ELICITING PEOPLE'S PREFERENCES FOR WATER SUBSIDIES AS COMPARED TO SYSTEM IMPROVEMENTS IN DELHI

Abstract ID: 536

Elastic Paper

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How customers should be charged for water is a subject of debate worldwide. One of the reasons for this is that there is no consensus on how to reconcile the tradeoffs between maintaining the financial stability of utilities and pursuing social objectives of equity and fairness while setting water prices. This is evident in the contrasting views reflected by the United Nations (UN) declaration of the right to water as a human right in 2010 and the focus of the 2022 Global Commission on the Economics of Water that considers water a scarce economic good. Following the UN’s declaration, many governments were motivated to provide households with some basic amount of free water. However, the long-term integrity of the water system is compromised when such policies disregard the consequences of prioritizing subsidies over maintenance and capital investments. Utilities may become reliant on grants or loans to cover losses, which may hinder the organized efforts to provide clean and affordable water to all over time.

Delhi’s free water policy from 2015 exemplifies these complexities. As per the policy, household connections that
use less than 20 m$^3$ of water a month do not have to pay for water. However, if the 20 m$^3$ threshold is crossed, the entire bill must be paid. Although 1.4 million households benefited from the policy in 2021, the government had to provide US$ 65 million to cover operation costs and an additional US$ 62 million for the subsidy. Almost 50% of the water supplied in Delhi is lost due to theft or leakage, and unconnected households and households getting poor-quality supply must rely on alternate water sources at additional costs.

Delhi’s water budget allocation embodies the government’s judgment of how important water subsidies are as compared to system improvements and maintenance. But without public involvement in budgeting, it is unlikely to reflect people’s preferences. Preliminary interviews with 35 residents indicate that low- and middle-income households may prefer to forgo the subsidy in order to get better service. Most interviewees also felt that the policy was unsustainable in the long-term.

I attempt to understand how important water subsidies are for people by asking the question: regarding the allocation of Delhi’s water budget, to what degree do people prefer subsidies as compared to system improvements?

Following random utility theory, a Best-Worst Scaling study will be carried out using a survey of 700 representative households in Delhi. Respondents will be presented with several water budget profiles, each showing different outcomes for five attributes found to be the most important from the preliminary interviews and a literature review – water subsidy, duration of water supply, time of day water is available, billing frequency, and water quality. For each budget profile, respondents will first be asked to choose their most preferred and least preferred outcomes. Then, from the remaining three choices, they would again be asked to choose the most and least preferred outcomes to get a full ranking. The analysis using rank-ordered logit will give quantitative measures of the relative importance of different outcomes and attributes of the water budget. A subgroup analysis will show how preferences vary by gender, income, neighborhood type, and eligibility for the water subsidy.

This paper will question the prevailing strategy, employed by many governments, of prioritizing water subsidies to uphold the human right to water. The results of the study will give quantitative measures of how important subsidies are as compared to different system improvements and can potentially be used to inform water budget allocations. More broadly, the method could be used to include the preferences of different groups when making public investment decisions.

Citations


Key Words: Water tariff, Right to water, Budget allocation, Subsidy, Preferences
The most recent IPCC synthesis report acknowledges that climate finance has become one of the critical enablers for accelerated climate action. However, in developing countries, there are barriers to redirecting capital to climate action and gaps to scaled-up funding from mitigation measures to adaptation actions. In order to surpass these gaps, an in-depth understanding of economic and non-economic losses and damages concerning climate change and their correspondence to financial systems in the Latin American region is necessary.

This research supports the broadening of finance flow in El Salvador as a case study that focuses on the organizational changes in the national context of the financial system. We sought an in-depth understanding of the theory and data related to climate financing and how it has permeated the national financial system. After 25 semi-structured interviews with representatives of the financial system, including banks, cooperatives, insurance companies, the national stock exchange, non-governmental organizations and international development banks, and governmental regulatory institutions, we analyzed the approaches to assign value to financial assets or liabilities and the potential economic effects for an adjustment towards a low-carbon economy (transition risks) in the national financial system.

The research question was, what are the dynamics of the financial system of El Salvador to respond to the demands of the phenomenon of Climate Change? While considering the incidence of public policies in the dynamics of the financial system and its articulation with current public policies and, precisely, detailing how the physical and transition risks are considered in different investment portfolios and second-tier banks, as well as green taxonomies, and the handling of third-party funds when they include climate change mitigation measures.

We found that international practices influence banks since the increased participation in the markets for green bonds, one of the findings shows the increased participation of sustainable finance products but is still limited and at the early stages of application just by a few stakeholders. This participation depends on the "guidelines" of bank holding companies or international development banks participating in the national financial system. Various investigations conclude in this sense that the phenomenon "poses a great aggregate risk for the economy and the financial system." Therefore, because of human influence and widespread impacts, an impact on financial markets where financial assets are exchanged between economic agents can be prevented.

An additional finding is the multivalent impact of public policies concerning climate finance. First, there are early stages of policies that promote greener procurement and environmental, social, and governance (ESG) issues through the "2022 Green Protocol of the Financial System" that, despite being limited, point to more responsible action. However, the lack of strict regulation procures certain flexibility in the innovation and promotion of financial products and services without a standardized green taxonomy.

Finally, although climate financing has originated from different sources, including climate funds that have remained constant, such as financing works for Multilateral Development Banks (MDBs) and Climate Funds that have increased in that period, except for local resources, which have been significantly reduced, represent a small portion of climate necessary funds and their destinations are heterogeneous. In El Salvador, the Green Climate Fund (GCF) and the Adaptation Fund have financed different projects, though reduced to agriculture, forestry, fisheries, and energy.

Our findings showed that proper investment and incentives for the financial stability of countries are necessary, besides the corresponding funding of climate actions to face their corresponding climate risks while focusing mainly on climate change adaptation, as additional sources of funding such as land-based financing instruments, better political frameworks, and incentives to increase climate finance as an alternative to divest investment.

Citations

Key Words: Climate Finance, Adaptation Finance, Climate Financing Polices, Green Taxonomies

ENCOUNTERING LANDSCAPES OF URBAN INFORMALITY THROUGH THE PRACTICE OF EVERYDAY LIFE: LANDSCAPE OF BOUNDARIES AND CONTROL IN GA-MASHIE, ACCRA, GHANA

Abstract ID: 646
Individual Paper

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When and how does a woman walking through her city’s streets with a basket on her head selling goods to passers-by become informal? At what point does she become a street vendor to be policed by the state? How do these women’s relationships with the state define their lived experience of informality? I undertake a comparison of women in fisher communities in two informal settlements – Ga-Mashie (Accra, Ghana) and Fort Kochi (Kerala, India), to build cases for a socio-spatial comparison of the lived experience of informality. I do this using photovoice remotely to solicit reflections from women, following which, I conducted walking interviews and in-depth interviews with the participants.

I use Yiftachel’s definition of informality. He calls informality gray space, a liminal existence in between legal (white) and illegal (black). This liminality is a direct outcome of the state’s changing definitions of legal and illegal. By this, the state is directly responsible for defining informality; in essence, determining if and when white becomes gray or black, especially in contested ocean-urban land borders. By doing so, the state shapes my participants’ daily lived experiences. In my study, I am interested in what hegemonies of informality these women produce as they move through the city’s space (to live, save, spend, and earn) and interact with the state. I use De Certeau’s framework of the practice of everyday life to develop a theory of landscapes of informality – each describing one mode of interaction with the state and defining these women’s lived experience of informality. Preliminary results from Ga-Mashie, Accra, Ghana, describe four landscapes of boundaries and control, protest, social structural violence, and deviance.

In this paper, I focus on the first landscape of boundaries and control and show how the state and its agents constrain the movement of my participants through their settlements in four ways. My participants, all women and all street vendors, are at the receiving end of this landscape of boundaries and control. First, by delineating municipal boundaries distinct from neighbourhood boundaries, the state confuses boundaries through the settlement that my participants traverse for livelihood. Merely by crossing the street, my participants are subject to rules from another municipal boundary. Over time, my participants can trace the change of these rules across different mayoral regimes. Second, by using local representatives to maintain those boundaries and creating a hierarchy of rule implementation with multiple interpretations, the state creates options for rent-seeking from my participants as they traverse those multiple boundaries. Participants negotiate the usufruct right to space using monetary payment, often over the amount they are legally expected to pay. Third, by using confusing language in the law, the state obfuscates the spatial definition of where vendors may vend. This creates a dependence on jurisprudence to establish conventions about how to treat potential offenders. Even though it was revised, the legislation provides no relief for my participants who prefer to negotiate punishment in the form of payment of
extra fees or forfeiting goods. Finally, by enlisting the imagination of the wider public in a project of modernisation, the state presents a vision of a city devoid of street vendors. Two projects are relevant here – the “Clean Your Frontage” campaign and the “Marine Drive” Redevelopment. Although they are sometimes the sole earners in their families, supporting multiple generations through school and university, participants find themselves at the wrong end of this modernising vision for the city of Accra. Both their neighbourhood and their livelihood, so critical to the evolution of Accra, now appear to be a visage of a living past.

Citations


Key Words: urban informality, urban poverty, street vendors, Ghana, urban oceans

A STUDY ON THE FORMATION OF PLANNING STANDARDS OF CHINA’S OVERSEAS INDUSTRIAL PARKS

Abstract ID: 711
Individual Paper

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City planning standards are the common guidelines and effective tools to ensure the reasonable formulation and implementation of urban and rural planning. It is also a kind of planning knowledge innovation. The formulation of planning standard is a process which involves many subjects. From the perspective of Multi-level Co-evolution, this article analyzes the dissemination and evolution of planning standards of overseas industrial parks in developed and developing countries, which could promote the development of backward areas and improve the innovation and impact of donor planning knowledge.

In this paper, the formulation process of industrial park planning standards is defined as an evolutionary phenomenon. The case experience, routines and the planning standards in the same period, In the process, the evolutionary force are interwoven, the evolutionary mechanisms react each other, the evolutionary tracks are overlapping. This article first analyzes the current research situation at home and abroad. It is concluded that multi-level evolution is related to the formulation of industrial park planning standards. Next, it analyzes the application status of China’s overseas industrial park planning standards. Since the 1990s, China has begun to build industrial parks in some African and Southeast Asian countries. Some of these countries have applied the planning standards of Europe or America, while others have established their standards based on the European and American standards. This facilitates the transmission of planning knowledge. Due to inexperience, the construction of China’s overseas industrial parks has had problems in the application of planning standards with local standards, which makes the formulation of planning standards of overseas industrial parks face many uncertainties. In this context, the case of planning standards in China’s Overseas Industrial Parks needs to be compared with the
Successful projects in other countries to learn from experience.

Singapore has formulated a number of representative city’s planning standards. Several industrial parks in China have learned from Singapore's urban planning experience and made some innovations, resulting in the dissemination of planning knowledge. The experience of Suzhou Industrial Park has been applied in Myotha Industrial Park, and the planning of the park reflects the standard integration of China, Singapore and Myanmar. The dissemination of planning knowledge started in Singapore, was adopted and innovated by China and then introduced to Myanmar. Taking Myotha Industrial Park and Suzhou Industrial Park as examples, this study compares the similarities and differences in the formulation of planning standards between China and Singapore, and analyzes the Multi-level Co-evolution and problems in the planning standards of China’s overseas industrial parks, so as to form reproducible planning theoretical achievements.

Citations


Key Words: Overseas industrial parks, Knowledge transmission, Planning standards, Evolutionary mechanism, Comparative analysis

"SUPPRESSING RIGHTS AND NEEDS WITH CONCRETE": PLANNING AS A BIOPOLITICAL TOOL IN ROHINGYA REFUGEE CAMPS IN BANGLADESH

Abstract ID: 813
Individual Paper

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A politics of fear produced through uneven power relations and cultural scripts construct immigrants, refugees, and asylum seekers as ‘fearsome’ threats to the host nation’s very existence (Zembylas, 2010). Refugees are seen as an undesirable ‘matter out of place’ that should be isolated from the rest of the host society to protect ‘the national order of things’ (Malkki, 1992), leading to a ‘problem-solving discourse’ that frames refugee camps as an impermanent spatial tool that encompasses both symptom and cure (Turner, 2016).

Refugee camps are delineated by extraterritoriality, exception, and exclusion (Turner, 2016), constituting an absolute biopolitical space where refugees live a bare life devoid of any social, economic and political power and are trapped in a state of chronic waiting and permanent impermanence (Agamben, 1998). Within the exceptional realm of the refugee camp emerges a humanitarian space where the international community comes forward to consign a state of protection and relief for refugees in an enduring but ultimately temporary way. Thus, a dual dimension of technology of ‘care and control’ (Malkki, 1992) shapes the governing paradigms of the refugee camps. Within this dubious sphere of the refugee camp, the problems of saving refugees are brought to the fore, “where distance and proximity co-exist in spaces of containment” (Pallister-Wilkins, 2020, p. 998).
This article examines two separate Rohingya refugee camps in Bangladesh in order to explore how urban planning as a biopolitical tool strengthens the strategies of exclusion in specific geographical contexts. From late 2017 to early 2018, around 700,000 Rohingya—a Muslim minority ethnic group in Myanmar—entered Bangladesh from Myanmar to escape an aggressive military campaign. There they joined 200,000 more Rohingyas in the refugee camps in Cox’s Bazar, Bangladesh, who had previously fled to the country to evade Myanmar’s state-sponsored persecution and abuses. To relieve the congestion in the disaster-prone mega camp areas in Cox’s Bazar, the Bangladesh government prepared to relocate 100,000 Rohingya refugees to the isolated island of Bhasan Char where ‘temporary arrangements’ for Rohingya refugees were being made. Bhasan Char exemplifies an extreme form of geographic exclusion, as island spaces are reconstructed as de-facto quarantine spaces to isolate asylum seekers and refugees (Pallister-Wilkins, 2020).

However, the literature on refugee camp planning and governance does not sufficiently consider how the geographic locations of refugee camps shape the mechanisms of exclusion, impermanence, and control. By examining two drastically different Rohingya refugee camps in Bangladesh, I demonstrate how both aim to establish exclusion and instill a sense of ‘impermanence’ among refugees but do so in different ways due to the geographic settings. Through ethnographic research and constructivist analysis of the built environments in the two different camps, I argue that planning has been used as a strategic biopolitical instrument by controlling and perpetually redefining the production and manifestation of impermanence – both sensual and tactile - in different degrees. The geographic locations of the refugee camps vis-à-vis distance/proximity from the host country population thus function as the paramount catalyst for driving those planning decisions. Once the rule of exclusion of refugees from the immediate surrounding areas has been established, the line between permanence and impermanence becomes blurred. The article contributes to the planning and design fields by offering a critical understanding of the spatial architectures of the built environment of refugee camps and the ramifications of those in the construction of the meanings of belonging, community, and society among refugees.

Citations


Key Words: Refugee Camp Planning, Exclusion, Impermanence, Biopolitics, Bangladesh

THE WRATH OF CAPITAL OR NATURE? THREATS TO CITIES FROM CLIMATE TO COVID.
Abstract ID: 860
Individual Paper

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Risk is the probability that something bad will happen, such that an activity, system, infrastructure, or investment will fail or fall short of expectations. Many see risk as being exacerbated by neo-liberalization, the devaluation of labor, and/or “exposure” to climate change. Risks are often determined by forces well beyond the direct control of
individuals, states, planners, and investors, particularly when associated with global phenomena such as climate change or the COVID-19 pandemic. The hazards (e.g., floods, droughts, heat waves) accompanying climate change have become more severe and frequent yet less predictable. Risk is further amplified in urban contexts and the unrestrained growth impetus of capitalism and its environmental impacts – what Parr (2013) calls the "wrath of capital."

Given their dense populations, complex-built environments, and importance as drivers of economic development, cities can be particularly vulnerable to risks and hazards, especially in cases where material and institutional weaknesses constrain urban management strategies. Such is the case in many African cities today, as many are double- or even multi-exposed to the vulnerabilities induced by rapid population growth, climate change, water scarcity, biodiversity loss, land degradation, and earthquakes in some instances, e.g., Accra, Juba, and Kivu, and the forces of globalization that can bring rewards for some, but often with huge risks for most. The risks and hazards associated with climate change and public health issues can be amplified significantly in African cities. Climate change can induce extremes of drought, flooding, and heat that threaten water supplies, displace residents, and reduce the productivity of laborers and small enterprises working in spaces that lack proper ventilation or cooling. Diseases such as cholera, malaria, and COVID-19 can spread rapidly, particularly in informal settlements where waste, sanitation, and drainage systems are often wholly inadequate, and settlements can be dense.

We employ the concept of sociotechnical regimes as the theoretical framework for examining the impacts of the different dimensions of climate change and recent public health threats on African cities. The framework views cities as sociotechnical systems constituted through three overlapping sociotechnical regimes: production, consumption, and infrastructure. These regimes are institutionalized, materialized, embedded, and practiced in ways that shape development outcomes and the prospects for progressive urban transitions. We also employ the concept of riskscapes to assess the geography of risk construction (proximate and distancediated) and its implications for urban regimes. Using these concepts, we explore risks to African cities and their populations from the exacerbation of existing hazards (e.g., heat, sea level rise, flooding, and drought) and new challenges such as the COVID-19 pandemic. We put particular emphasis on examining how “natural” threats could impact infrastructure regimes (e.g., through increased floods, heat), production regimes (e.g., public health and climate-driven impacts on worker productivity and industries), and consumption regimes (e.g., the quality of life and amenities possible/available to urban residents). Without effective planning and the capital to invest in upgraded production and infrastructure regimes, African cities will remain highly vulnerable to such forces and desperately need forward-thinking and context-sensitive strategies to manage heterogeneous circumstances.

Citations


Key Words: African cities, sociotechnical regimes, Riskscapes, Climate change, Resilience

ELITE COALITIONS AND ECONOMIC TRANSFORMATIONS: EXPLAINING SUBNATIONAL DIVERGENCE IN MEXICO
Abstract ID: 870
Individual Paper
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How do political coalitions among state actors, business elites and civil society leaders shape industrial policy and economic development at the subnational level? Drawing upon a combination of in-depth interviews, archival research, and a unique dataset of state-level government officials, we address this question by comparing the economic and political trajectories of two Mexican states, Jalisco and Querétaro. We trace the origins of these states’ divergent trajectories to different types of elite coalitions, and in turn, investigate the long-term roots of these coalitions. These long-term pathways of coalitional formation and policy execution have important implications for local economic specialization, the roles of domestic and foreign capital in economic growth, and the generation of local investment and knowledge formation.

Jalisco was long considered a major “growth pole” in the Mexican economy, but the state foundered on uneven economic performance since the 1980s. Meanwhile, Querétaro was long an obscure backwater until it emerged as a surprising national development leader in recent decades. Both states’ recent economic changes display strengths and weaknesses that are salient to our understanding of how political coalitions shape long-term economic development pathways.

Jalisco and Querétaro’s distinct aggregate economic performance in recent decades are associated with more complex patterns of government intervention and private investment: in Jalisco, scattershot transitions into new economic activities (e.g., digital media, automotive technology) fostered high diversification, wherein firms, largely supported by an array of mostly privatized club goods, explored a wide range of economic activities. By contrast, in Querétaro, economic shifts were largely focused on a narrow set of activities, as firms built upon more centralized, publicly-provided supports for industry, often via public associations and research institutes.

The sources of these distinct economic patterns can be traced to divergent modes of industrial policy: in Jalisco, the state-level government consistently adopted a “market-following” policy approach to support transitions into new activities – one that was responsive to, and largely guided by, organized business. Alternatively, in Queretaro, the state-level government favored a “market-leading” policy mode, whereby it consulted with organized business and other civil society actors, but largely played a central role in coordinating collective action and guiding investment.

The two states’ divergent modes of industrial policy in turn emerge from key features of their state-level political coalitions. In Jalisco, state-level governments largely defaulted to the market-following mode because of their top officials and policymakers’ high-turnover and low tenure (i.e., low stability), and almost-exclusive recruitment from either national political party structures or organized business interests (i.e., low cognitive diversity). In Queretaro, instead, long tenures and low turnover (i.e., high stability), as well as a wider diversity of backgrounds represented by government officials (e.g. experience in government, business, academia or labor; party affiliation) characterized officials and policymakers capable of embracing the market-leading policy mode.

This leads to a twofold argument. First, that state-level economic policy patterns are shaped by different webs of alliances between local economic, political, and civil society elites. The features of these webs define who takes leadership roles in economic policy and how these policy leaders interact. Second, we show that these distinct coalitional patterns can be traced back to the long-term economic and geographic histories of these states. In Jalisco, state action took place in a context of supporting a population and trade hub that had thrived since pre-colonial times, whereas in Querétaro, basic access to markets and natural resources, such as water, were a constant struggle, placing an imperative upon a more activist state to make development viable.

Citations
PROPERTY AS A SOCIAL FUNCTION: CLAIMING URBAN VACANCY IN SAO PAULO

Abstract ID: 874
Individual Paper

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Globally, there are varied causes and effects related to the issue of urban vacancy, based on a vision of cities as complex, and dynamic processes of obsolescence rather than stasis, including brownfields, vacant lots, and land held by speculators, combining multiple reasons why land may remain idle. While the COVID-19 pandemic brought new meaning to the issue of vacant spaces, recognition of the scope of vacancy related to housing precarity and affordability was highlighted long before. A growing interest in property abandonment and ‘ruination’ views vacancy as disordering narratives of progress and decline related to deindustrialization, focusing on spectacular and culturally resonant locales. Despite the relevance of vacancy to a range of processes, the idea is under-theorized in urban studies. In some cases like Brazil, vacancy is linked to speculation and the expectation of future price increases, or ‘speculative vacancies’, when real estate is considered an investment opportunity. In rapidly urbanizing contexts like Latin America, the retention of vacant land in well-located areas due to expectations of future gains benefitting owners is a challenge. In such cases, land is transitory because it is moving away from a past use, towards an unknown and unplanned future use.

In this article, I explore the case of urban vacancy in the city of São Paulo, where sizeable growth in per capita income and institutional changes reduced legal uncertainty to produce and finance housing, leading to unprecedented real estate market expansion, especially in central areas. Yet as some have pointed out, São Paulo has more empty properties than families lacking housing. In such contexts, land speculation results in a context where the real estate market is out of reach for the urban poor. Likewise, since the 1990s, social movements in São Paulo have been squatting in empty central buildings to convince the local government to use vacant property for social housing. Such struggles underline the vacancy issue, sometimes capable of promoting political change. Thus, while vacancy emphasizes norms of exclusion and housing precarity, it may also open possibilities for transformation due to new policies, mechanisms for change, and political support for vulnerable populations.

Focusing on a case study of São Paulo, in this article, I make the case for seeing vacancy through debates on the social function of property, showing that the commons provides a lens through which to advance these ideas. I use this perspective to untangle the complex property regimes implicit in producing urban vacancy, the struggles, contestations, and forms of participation emerging alongside vacant land, and the opportunities for urban transformation amidst urban vacancy. I underline both the inequalities and fragilities produced by property regimes in such contexts, yet also the possibilities for urban transformation which may emerge. The article is based on an analysis of vacancy data in São Paulo, and interviews with key actors.
TEACHING INTERNATIONAL DEVELOPMENT PLANNING: A REVISED PEDAGOGY FOR A NEW WORLD ORDER

Abstract ID: 951
Individual Paper

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Over more than two decades of teaching international development planning to master and PhD students in planning and those from other fields who recognize its value, the initial and ongoing approaches to the covering topic no longer do justice to how international development planning has evolved. This paper critically looks at how it has been taught at present and ways that it might be modified to better capture the changing dynamics in practice. With modifications introduced through new readings and an expanded range of topics, the course currently adheres to a set structure. The initial three weeks of the course deal broadly with the emergence of international development institutions and development theory in the 20th century (that is, the colonial and post-colonial contexts), followed by a substantial segment assessing critically the United Nations, the World Bank and several key bi-laterals. Woven into this coverage are cases demonstrating some successes, but also coverage of a share of failures, in the areas such as poverty reduction, provision of basic infrastructure, effective nation governance and planning systems (such as proliferation of decentralization initiatives to replace centralized planning). Attention to mainstreaming women/gender in development, community-based policy assessment, and participatory planning round out the topics covered. Some utilization of case studies, drawn from the three foundational texts, Sen, Development as Freedom (1999), Malloch-Brown, The Unfinished Global Revolution (2012), Sachs, The Age of Sustainable Development (2015), offer perspectives from the ground level and the impacts of development work on people. To reinforce the emphasis on development practices, students study the structure, objectives and practice of an aid organization and then assess one of its projects. An assessment of whether performance matched project targets in then done to enable students (at least virtually) to assume the role of a development planner and to discern differences between project objectives, activities, and outcomes.

While there remains value in this approach, it now seems too influenced by the working of the traditional aid organization and lacks grounding in new global realities. Clearly, a fundamental change in the international development field is the addition of new actors, particularly non-governmental organizations. This is especially evident in the Global South where new civil society collaborations (CSCs) do planning previously dominated by the formal aid systems institutions. The CSCs have introduced new ways of addressing development needs that at the same time reflect a Global South. New research on Global South development practices of North-based aid organizations (especially the bi-laterals) documents the conflicting agendas of aid efforts in the post-colonial era. These need to be more fully incorporated into the course cases. Also, the emergence of the Sustainable Development Goals initiative to unite aid givers, recipient nations and civil society organizations to address environment and development needs requires attention not just to the stated goals but also to the very different levels of commitment and accountability across nations. Similarly, the emergence of new multi-lateral and bi-lateral development actors has changed the international power dynamics in aid (here China’s emergence warrants a level of coverage not considered essential when the course was initially formulated). Chinese students taking the course in recent years have noted this oversight.

This paper will map out and justify a revised version of the international development planning course, introduce
new key literature, expand its institutional coverage, and redefine course objectives to reflect these changes. Full coverage of current development planning practices requires elevating case studies to a more central place in course materials. Reformulating how students engage with development assistance programs probably require examining multiple participating organizations (including national and local institutions within Global South nations).

Citations


Key Words: Global South, development planning, multi-lateral, bi-lateral, non-government organization

THE SOFT PLANNING SPACE AROUND THE “CARACAS EN BICI” PROJECT: ASSESSING THE LEGITIMACY AND EFFECTIVENESS OF INFORMAL MOBILITY PLANNING IN VENEZUELA

Abstract ID: 991
Individual Paper

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Soft spaces, defined as spaces “other than those of the statutory planning system” (Allmendinger and Haughton, 2009, 617), and soft planning, defined as planning practices taking place in soft spaces and seeking synergies between different kinds of actors through informal or semi-formal governance networks (Faludi, 2013) have been an oft-discussed topic in recent planning-theoretical discourses. In the context of Global North, some scholars have argued that soft planning makes governance of space more agile and effective, because it can focus on selected strategically important themes and spaces and avoid bureaucracy related to traditional planning and governance procedures. However, other scholars have criticized soft planning because it often bypasses democratically elected governments (Metzger, 2011, Haughton et al., 2013). Some critics have also argued that soft spaces make planning less efficient, since they create a parallel layer of governance on top of the existing formal governance structures, increasing thus institutional ambiguity.

This paper discusses soft spaces and soft planning in the context of Global South, where formal governments are often less stable than in the Global North, and oftentimes their democratic legitimacy can also be questioned. It analyses cycling mobilities in the city of Caracas, Venezuela, focusing especially on the ‘Caracas en bici’ case, a winning entry on a competition for developing cycling as an urban form of mobility. The project proposed, among other things, the incorporation of a bike-sharing system and nodes for multi- and intermodal shifts between bikes and existing public transport, and the establishment of new public spaces to support revitalization of soft mobility in the city.

The competition was launched in 2012 by the Metropolitan Municipality of Caracas (a governance structure that no longer exists), to implement the metropolitan mobility visions by the year of 2020. ‘Caracas en bici’ never materialized, however, even though there were smaller pilot projects for testing the design ideas and implementation patterns of the project in selected municipalities of the metropolitan area. For instance, the construction of a 19 km bicycle lane was carried out in and by one of the biggest municipalities in the metropolitan area, though not following the project vision and ideas. Even though the project did not succeed in stimulating and
consolidating of cycling and walking based urban mobility in a manner that it was intended to, as a legacy of the project there is now an emerging network of actors consisting for instance of the representatives of the city and activists. This network has started to create pressure and develop measures and urban interventions to enhance walkability and bikeability in the city.

We look at the “Caracas en bici” project through the lens of “soft spaces” discourse, asking whether informal and network-based projects are always a problem for the legitimacy of planning, or could they also rightfully challenge existing governance structures that suffer from legitimacy deficits. Here we are interested especially in the relations of input, throughput, and output legitimacy (see e.g. Schmidt 2013) in people’s perceptions of legitimate governance of urban space. We build our analysis on the interviews with designers, practitioners, academics, and urban and mobility activists in Caracas.

In the theoretical conclusions of our paper, we discuss the applicability of the soft spaces discourse in the context of Global South, the Global South perspective having been a largely neglected point of view both in planning research and education thus far. In the empirical conclusions, we elaborate on the pros and cons of soft, networked planning projects from the point of view of effectiveness and perceived legitimacy of governance in the Venezuelan context.

Citations


Key Words: soft planning, soft spaces, Global South, soft mobilities, cycling

INTERSECTIONAL LIVED EXPERIENCES AND DIVERSIFIED MEANS OF NON-MARKET FINANCE: HOW DO COMMUNITY-BASED ECONOMIES ACTUALLY WORK FOR/BY THE MARGINALIZED?

Abstract ID: 996

Individual Paper

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Around the world, there is an increasing interest in environmentally-attuned and socially-oriented economic alternatives partially attributed to the wake-up call of climate change and COVID-19 as planetary crisis aggravated by socio-economic disparities. The recent pandemic brought this fact into the daylight and showed us how our present crisis-ridden economy is in fact built on the uneven burdens of social reproduction (care) and exclusionary spheres of production (capital & finance) for gendered and racialized groups. The same group of people that we called essential during the global pandemic. Responding to these unjust trends, growing number of activists, organizations and scholars have embraced an array of old and new techniques in learning, lobbying, publicity and rallies under the motto of “Another World is Possible” (Utting 2015). The myriads of formal and informal Social and Solidarity Economy (SSE) practices, such as mutual-aids, saving groups, cooperatives etc., are aiming for an alternative economy that reimagines social relations and prioritizes life-making and care over profit-making.
objectives. These economic alternatives broaden and reframe our understanding of what constitute as economy to encompass much more than the control of production while marking the ethical coordinates of an economy that cares for us.

Unfortunately, except for a small portion of studies, the proliferating literature associated with SSE remains mostly gender and race blind, and regionally limited in their focus to Western European and Latin American cases. It also falls short in thoroughly analyzing the tensions, contradiction and nuances accompanying the central role of care and non-market work (not only at the household level, but also at the level of the community) that shapes and sustains such practices and their broader effects throughout the community. The mainstream SSE literature neglects to acknowledge its roots in the Global South and Muslim societies where informal forms of SSE such as ROSCAs have been practiced for a long time even though the vocabularies and terminologies used differ based on the context (Hossein & Christabell 2022).

Provoked by these glaring gaps in SSE literature in terms of gender, race, region and religion, and examining the central/integral role of life-making in SSE practices, this paper takes us to the most marginalized informal settlements of Iran, at the border of Pakistan, to study a group of Sunni-Baluch women as ethnic and religious minorities and their grassroots organization; where they use their needlework craft as a collective income generating activity to provide jobs and extend finance opportunities for the women in their community, and further engage in collective acts of care and community-based development.

Using qualitative mixed-methods case study, this paper seeks to answer: What is the role of marginalized women solidarity networks as instruments for poverty relief & economic development? How do community-based economies actually work for/by the marginalized? To answer these questions, it draws on the Diverse Economies literature and the Black Feminism insights on Intersectionality, Lived Experience, and the Black Political Economy (Hossein 2019; Gibson-Graham & Dombroski 2020).

This paper presents an approach with the potential to fundamentally transform the field of social economy from a charity-based and capital centric model to one of community economies and solidarity model which leads to sustainable community-based development. By recognizing and elevating the overlooked ad undervalued roles of low-income Muslim women and their solidarity economy networks as instruments for poverty relief and community-based development, we have the potential of transforming the way resources are normally allocated in Global South communities (Bahramitash 2014). The Findings provide important insights for scholars, policy makers, community organizers and NGOs; contribute to international community economies and development debates; and advocate for an interdisciplinary and intersectional approach to issues of social justice and equity in planning.

Citations


Key Words: Community-based economies, Non-market finance, Lived experience, Intersectionality, equity planning
RE-DEFINING TOD IN LIGHT OF THE AFRICAN EXPERIENCE: A UNIQUE OPPORTUNITY FOR SHAPING URBAN AND ECONOMIC GROWTH

Abstract ID: 1011
Individual Paper

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As 21st-century urbanization unfolds in the Global South, rapid demographic and economic growth are producing more and larger cities. Estimates suggest that Africa alone will witness urban population growth of nearly one billion people by 2050 (Moriconi-Ebrard et al., 2020). Transportation infrastructure, and especially rail systems, play a critical role in structuring the spatial and economic development required to accommodate existing and future mobility needs. Better transportation systems, especially mass transit, have the potential to improve accessibility for those traveling within metropolitan areas. At the same time, these large-scale investments carry the potential to fulfill a broader set of development objectives.

The field of transportation planning has generally recognized the importance and the benefits of a more holistic and multidisciplinary approach that goes beyond the efficient movement of people toward an improvement of social, economic, and environmental aspects of metropolitan areas (Kim et al., 2018). Such an approach can be broadly characterized as Transit Oriented Development (TOD). The central mechanism of the TOD concept is centered on principles aiming at the creation of walkable and livable communities, through the integration of land use and transportation planning. However, to date, the TOD framework has largely been developed within the social, economic, and institutional context of advanced economies – more specifically, North American cities. The research questions addressed in this research are: How to apply and contextualize TOD principles in developing countries that are currently experiencing massive investments in urban and suburban transportation systems? What specific TOD implementation mechanisms are needed to achieve land use and transportation integration through TOD at multiple scales, ranging from the metropolitan to the street level.

To address the research questions, this research crafts a relevant framework for TOD planning in developing country cities. Based on a review of the global literature on transportation, land use, and social and economic development, it provides a conceptual framework for understanding the range of “inputs” – both structural and planning process factors – and “outputs” – both transportation-specific and broader human development outcomes – that characterize major investments in urban and suburban passenger rail. Furthermore, we propose an application of the proposed framework to a selection of Sub-Saharan African cities, where we promote contextually appropriate TOD implementation mechanisms that account for local urban and economic development challenges.

The findings suggest that context-specific structural factors and limited vernacular knowledge on TOD limit the integration of land use and transportation through TOD locally. The goals of TOD need to be revisited and reimaged in rapidly developing contexts where the concept holds the greatest potential to shape the urban form and formalization of the local economy (Pojani & Stead, 2018). Planning for inclusive metropolitan development has to take into consideration impacts along four dimensions: environmental sustainability, land development and urban form, regional economic development, and equitable access to opportunities. In the end, we aim to inform planning processes around urban and suburban rail investments in Sub-Saharan African cities, faced with a unique, but narrowing, window of opportunity to invest in rail before private motorized vehicles become the dominant mode of travel.

Citations

Key Words: Transit-Oriented Development (TOD), Development, Global South

SEEING AS AN OIL CITY: PLANNING CHALLENGES IN THE MIDST OF A GLOBAL ENERGY TRANSITION
Abstract ID: 1020
Individual Paper
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Cities are at the forefront of the impending energy transition. Shaped as they have been by fossil fuel consumption, urban regions are bound to spearhead the necessary changes. Many of them, especially those with strong ties to prevailing energy production systems, are also likely to suffer the unbounded consequences of such transition. As a new socio-ecological regime of accumulation develops, a whole set of rearrangements to the spatial organization of society take place. However, the tasks and effects of a shift towards low-carbon energy sources will not be distributed uniformly within or among the world’s cities. Far from generating one single universal mode of energy-efficient urbanization, the transition out of fossil fuels is re-engendering a plurality of distinct, interconnected, and ostensibly stratified urban landscapes. Nowhere is this more evident than in the varied terrains of the post-colony and associated territories of racialized expropriation. Considering that fossil-fueled capitalism has shaped forms and processes of urbanization in a highly differentiated fashion, the making of new urban landscapes is bound to incompleteness, discrepancy, and continuing rounds of subjugation. These divergent interdependences and the dividing boundaries upon which they rest have significantly affected our present urban condition. As we face the global climate emergency, they should become ever more so critical in shaping the futures we plan and hope for in our cities.

This paper grapples with these challenges by “seeing as an oil city.” Written from research undertaken in Luanda, a burgeoning urban region that has experienced tremendous transformations since the turn of the century, it thinks through the bidirectional impacts of the impending energy transition. Analyzing both official urban development initiatives and emergent modes of peripheral urbanization as effects of fossil fuel extraction off the coast of Angola, the paper offers a conceptual framework to help the field of planning prepare itself to face the uneven risks of climate change in a deeply interconnected world.

Citations


Key Words: Energy Transition, Climate Justice, Oil Urbanism, Angola, Africa
This paper delves into the planning and development of Amaravati, the greenfield capital city of Andhra Pradesh, through the use of land pooling strategy (LPS). Land Pooling Strategy (LPS) is used in many countries to reconfigure land parcels after pooling contiguous lands and servicing areas with basic infrastructure to achieve a well-coordinated, planned development. There are several variants of LPS. This voluntary tool of LPS used in Amaravati is notable for its unprecedented size, but also presents areas of concerns. The article examines the details of the land pooling policy (Land Readjustment), including its implementation and impact. The paper highlights the positive social benefits of the LPS (such as access to amenities and services, property value gains, limited displacement, limited to no use of eminent domain), which have helped build the initial public support. However, it also criticizes the corruption in the LPS, and notes notes issues with coercion, illegal land grabbing, speculation, and caste influence that undermined the voluntary participation goal. The paper specifically focuses on how the new city was planned and developed using the LPS. While the LPS was initially intended to be democratic and equitable, expected to benefit all citizens, in this paper we argue that it has primarily benefited wealthy landowners with ties to specific group -- the Kamma Caste. Nevertheless, the LPS has been successful in acquiring over 33,000 acres from participating landowners, and property values have increased several folds of the initial amount. Participating landowners were returned up to 30 percent of their original land parcel, which the government of Andhra Pradesh had significantly improved.

Additionally, the paper notes that Amaravati is being built on agricultural land in a region that was recommended not to be developed, with its proposed location in the Visakhapatnam-Guntur district remaining a topic of debate, even reaching the Supreme Court in 2023. At large, this paper is a critical review of innovative LPS as used in planning the Greenfield capital city of Andhra Pradesh, and synthesis different ideas and views of the LPS in its current state. In this paper, scholarly literature on land pooling, land readjustment, and official documents and plans are reviewed as part of the methodology. The importance of this article is evident due to the international focus of a planning strategy not commonly seen in the United States, although interestingly, the Washington DC was planned using a similar land pooling mechanism. By sharing this research exposing active planners and American planning students to new planning techniques, this article furthers inclusivity and diversity awareness and can lead to new and innovative planning practices within the United States.

Citations

- Mittal, Jay, and S. Berson. 2022. “Self-Financing Urbanism in Developing Countries: A Ready Reckoner for Land Value Capture (LVC) Instruments.” Ch 9 in Chatterjee et al. (Eds.), Sustainable Urbanism in Developing Countries, CRC Press. DOI: https://doi.org/10.1201/9781003131922
RESPONDERS AS SOCIAL PROTECTION AND HUMANITARIAN AID PROVIDERS AFTER RAPID-ONSET CLIMATE SHOCK: EXPANDING THE POOL OF ACTORS - THE CASE OF TROPICAL STORM ERIKA IN DOMINICA

Abstract ID: 1100
Individual Paper

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The roles of social protection (SP) and humanitarian aid (HA) in disaster response have become increasingly important for meeting the needs of disaster victims after climate shocks. These response instruments are widely discussed in research at the intersect of shock-responsive social protection and HA referred to here as SRSP/HA studies or intersect studies, where SP and HA are examined simultaneously. During the shock response period, disaster responders often provide SP or HA assistance simultaneously. However, most intersect research taking an in-depth look at the provision of SP and HA assistance in emergency response focuses on the state and on non-governmental organizations (NGOs) and HA organizations such as the Red Cross, the United States Agency for International Development (USAID), the United Nations Children’s Fund (UNICEF), and United Nations (UN) World Food Program (WFP) in singular roles as either SP or HA responders.

While there is evidence for the dual role of a wider range of disaster responders as both SP and HA providers in SP and disasters studies literature, most papers at the intersect of SP and HA response focus their analysis on formal actors such as the state and NGOs providing one role at a time. Few papers at this intersect consider the full range of actors across the formal and informal spectrum by mapping out multiple responders carrying out their varied and similar functions simultaneously. Within these discussions, Caribbean small island developing states (SIDS) seem underrepresented, affording an opportunity to investigate SIDS like Dominica, whose residents faced the devastating impacts from Tropical Storm Erika in 2015. This research identifies a wide range of formal and informal responders providing SP and HA after the storm. Using a sample of 191 households in 4 of the most severely impacted Dominican communities, this study reveals a diverse set of disaster responders, to include the state, non-governmental organizations (NGOs), faith-based organizations, for-profit organizations, community-based organizations and informal responders such as family, and spontaneous volunteers.

It was found that the dual role of this wide range of responders heightens issues around resource overlap as many of the same instruments were provided by multiple responders. Informal responders were found to be just as important as formal ones especially in the immediate aftermath, providing many of the same types of assistance as formal organizations such as the state and NGOs. In considering the usefulness of overlap, the vulnerability and needs of affected households (to include socio-economic vulnerabilities), capacity and suitability of responders in providing specific instruments, and response timing and targeting are important considerations.

A multi-method case study research approach was used to investigate the range of state, non-state and informal disaster responders. This allowed for an elaboration on case study research as a nonlaboratory social science methodology. My research is exploratory and analytical and responds to the need for more empirical research for practical solutions. The researcher administered a survey to approximately 191 heads of households in 4 communities, as well as approximately 20-25 in-depth household interviews with heads of households from all communities. Other key informant semistructured interviews (approximately 30) were held with national and local government officials, representatives from community organizations, non-governmental organizations and religious organizations.

This research is useful in practice and research. It is a contribution to the shock-responsive social protection and humanitarian aid intersect literature, which is currently focused on formal responders and their singular roles in non-SIDS contexts. This work will be useful to SIDS’ governments, nonprofits, development organizations and donor organizations working to provide appropriate and timely assistance during short-term response. It helps to answer the questions of who is providing what and when, for effective governance.
Citations


Key Words: shock-responsive social protection, humanitarian aid, informality, disaster response, covariate shock

THE RELATIONSHIP BETWEEN STREET AS A PUBLIC SPACE AND POVERTY IN DEVELOPING COUNTRIES

Individual Paper
NAM, Jiin [University of Seoul] poasana2021@uos.ac.kr, presenting author

The significance, necessary, and role of public space have been highlighted for sustainable urban planning. One of the benefits public space provides is poverty reduction. Developing countries in particular are facing the need of public space in the context of rapid urbanization. This phenomenon is accompanied with slums and informal settlements for low-income urban residents. Street as public place plays a pivotal role to connect those people to other people, provide opportunities to get into job markets, and make people enable to walk and ride a bicycle. In this paper, I pay attention to the relation between street connectivity and poverty in developing countries. According to UN-Habitat, there are three components of street connectivity: street density, intersection density, and land allocated to street. The result reveals that street connectivity and poverty are in negative relation. This implies that improving street connectivity can help poverty reduction.

Citations


Key Words: Street connectivity, Public Space, Poverty, Developing countries

BUILDING RESILIENT URBAN COMMUNITIES BY GROWING FOOD: PERILS, PROBLEMS, AND POTENTIALS FOR PLANNING AND DESIGN IN DEVELOPING ASIA

Individual Paper
The salience of local food security to combating urban poverty, especially given the connection between health and socioeconomic mobility, and building overall urban resilience is increasingly receiving policy attention (Raja et al. 2021). It would be fair to say that in recent decades, compared to other essential urban services, enabling food security for the urban poor in the Global South through planning and development has been a relatively low priority. However, during 2020 and 2021, strict lockdowns and supply chain disruptions, globally and nationally, due to the COVID-19 pandemic underscored the perilous state of food security for those reliant on urban informality; exposed challenges stemming from extant urban policies and underlying problems in contemporary land use planning; and signaled potentials for fighting food insecurity and enabling resilience by adjusting prevalent planning premises and practices (Das and Susantono 2022; Das, Sherpa, and Das 2022; Taylor et al. 2022). Increasing urbanization, and the associated modernization and professionalization of urban planning in the Global South have steadily distanced, physically and conceptually, urban communities from the act of growing food with deleterious consequences (Satterthwaite, McGranahan, and Tacoli 2010; Marshall and Randhawa 2017).

Using a review of secondary research, and multi-method, primary evidence (some extensive and some preliminary) gathered since 2019 through field research in urban poor communities in Bangladesh, India, and Indonesia, this paper: 1) exposes myriad forms of food insecurity, and how and why it varies across different planning and policy contexts; and 2) importantly, seeks to demonstrate how incentivizing innovations in planning and physical design can reduce food insecurity and enhance urban resilience. The contribution of this paper is especially relevant given that the threat to urban communities from public health exigencies is expected to keep rising and becoming more frequent (Spencer, Marasco, and Eichinger 2021). The paper also stresses the need to think, innovatively, about enabling interventions that bridge the disciplines of planning, landscape architecture, and architecture; as well as reconfiguring existing and promoting new local institutional arrangements and relationships.

Citations


Key Words: Food security, urban resilience, Planning and design, Informality, South and Southeast Asia
WE DON'T HAVE RELIABLE WATER: COMMUNITY RESPONSES TO WATER INJUSTICES AMONG INFORMAL SETTLEMENT RENTERS IN RIO DE JANEIRO

Abstract ID: 1314
Individual Paper

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Water injustices from inadequate clean water, sanitation, drainage, and solid waste management are critical planning issues that affect the health and well-being of the low to middle classes who rely on informal settlements for affordable housing. Renters increasingly comprise a majority share of residents in the rapidly expanding informal settlements of the global South, with some as high as 92 percent renter inhabitants. (Gulyani et al., 2006). However, renters have fewer claims to land than landlords. Therefore, they incur the poverty penalty; paying higher costs for informal basic services over the formal city (Mutinda and Otieno, 2016). Recent literature calls for planning to further explore land tenure as a key determinant of health and the role of the state to regulate for the public health interest (Ouma, Corburn, and Weru, 2022).

The New Urban Agenda (NUA) calls on planning to materialize equitable and just conditions by planning for basic socioeconomic needs including universal water access. One third or three billion people will live in informal settlements by 2050 (United Nations, 2016). Planning for more sustainable and inclusive futures is dependent on alleviating water poverty and facilitating equitable access to clean, affordable, and reliable water. Cities are best suited to promote just and sustainable development (Reyes, Reyes, and Daigle, 2020), yet when partnered with civil society, they are capable of providing equitable access to water (Beard et al., 2008). CSOs are increasingly fulfilling planning roles traditionally performed by cities (Das, 2016).

To examine how CSOs respond to water injustices among informal renters, a case study of Rio de Janeiro, a city with over one thousand heterogeneous favelas with varying levels of water accessibility, asked (1) Why do favela renters experience disproportionate water injustices? (2) How do CSOs and the state act on water injustices among renters? Critical ethnographic methodology included in-depth interviews with civil society, CBOs, residents, planners, and academics. They were strengthened with reviews of community derived news articles, NGO led research, and social media data scraping. Findings demonstrate that by failing to act on water deprivations based on land tenure and provide equitable access to clean water to favelas, the city facilitated a public health emergency. In response, renters engaged with CBOs to advocate for their water needs.

Citations


Key Words: informal settlements, public health, water, sanitation, land tenure

Track 7 Research in Motion (RiM)
ARE INDIGENOUS PEOPLE/S IN RURAL AREAS MORE VULNERABLE TO IRREGULAR MIGRATION THAN OTHER GROUPS? A BAYESIAN SPATIAL ANALYSIS.

Abstract ID: 56
Research in Motion (RiM)

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Irregular migration represents a phenomenon that requires an exhaustive analysis beyond conventional methods to be understood. In the case of Guatemala, with an increasing flow of irregular migrants to the US every year, little attention has been paid to the study of the factors that influence these events. Bayesian spatial analysis represents an alternative to studying this phenomenon by estimating the occurrence probability of events like irregular migration. Instead of focusing on accuracy in defining relationships among variables like frequentist models, Bayesian estimates trends that arise based on available data and prior knowledge. In this project, I conduct a Bayesian spatial analysis to understand the incidence of five socio-ecological components (insecurity, cultural, economic, governance, and environmental) with the number of irregular migrants to the US from Guatemala. I conduct the study on the Municipio (Towns) territorial scale and pay particular attention to Indigenous People/s, the most vulnerable group in the country due to the inequalities and limitations experienced every day. By considering an initial number of 15 variables, I conduct a Principal Component Analysis (PCA) to prioritize the elements that explain the variance. Then, I apply Integrated Nested Laplace Approximations (INLA) in R-Software to develop a model that describes the trends, spatial effects, and exceedance rates of migrants in the following years. The results suggest the importance of accounting for a spatial location where migration flow is prevalent and provide trends on the probabilities of increasing rates in some Municipios compared with others, including the differences between urban and rural populations. The comparison between Indigenous and non-Indigenous People/s suggests the need for a cultural understanding of Indigenous ways of being where racism and coloniality are embedded within Guatemalan society. This study offers a methodological and practical application for similar cases and allows to inform planning strategies in order to mitigate the effects of irregular migration in non-developed countries.

Citations


Key Words: Indigenous People/s, Irregular Migration, Bayesian Spatial Analysis, Urban/Rural Indigenous

URBAN EXPANSION BY WAY OF URBAN INFORMALITY: UNDERSTANDING INFORMAL LAND RECLAMATION IN INDONESIA

Abstract ID: 164
Cities are expanding not only landward but seaward. In the 21st century, the world has added 253,000 hectares of artificial land along its coasts—equivalent to the land area of Luxembourg (Sengupta, 2023). Of the world’s 135 major coastal cities, 78% have engaged in land reclamation activities (Sengupta, 2023). Prominent reclamation projects include the Hong Kong airport, Al Marina in Abu Dhabi, and Flevopolder in the Netherlands. In coastal cities, seaward urban expansion increasingly serves as a solution for land scarcity. These figures and examples, however, account only for land reclaimed in major cities using geo-engineering techniques. To date, the systematic study of land reclamation in cities of less than 1 million people, particularly land informally reclaimed by coastal communities for themselves, is missing from urban planning scholarship. Moreover, research methods used to study land reclamation have generally employed spatial analytics from afar without the nuance of qualitative inquiry.

In the secondary city of Cirebon, Indonesia, coastal residents informally reclaim land by building on the river delta’s natural sedimentation using household waste as backfill. Residents transact these new plots of land in an informal land market to construct self-help housing. The local government estimates that residents have reclaimed 70% of the city’s 7 km (4.3 mile) coastline from the Java Sea. As of 2017, residents had constructed more than 350 housing units on reclaimed land in the neighborhood of Lemahwungkuk Village. While the new land has provided affordable housing for coastal communities, the associated environmental degradation has decreased fish catch and discouraged recreational use of city beaches. Moreover, the city’s projected population growth combined with increased frequency and intensity of sea level rise and rainfall events will increase its climate risk. Importantly, Indonesian cities with less than 1 million people hold more than 75% of the nation’s greenhouse gas abatement potential. Informal land reclamation in Cirebon therefore intersects salient policy dialogues on informality, real estate markets, urban expansion, and climate change.

Using Lemahwungkuk Village in Cirebon, Indonesia as a case study, this preliminary dissertation research expands the typology of land reclamation to include informal processes. How do people in poverty secure land and housing in cities? What is the market for and regulatory environment of informal land reclamation? And what can planners do about the “unplanned and unplannable” (Roy, 2005)? Using a mixed-methods approach with remote sensing, transect walks, and semi-structured field interviews, I investigate the informal land reclamation process from the staking of new parcels through the first informal real estate transaction to understand urban expansion by way of urban informality, offering new directions for planning.

Citations

- McGee, T. G. (1967). The Southeast Asian city: A social geography of the primate cities of Southeast Asia. G. Bell and Sons, Ltd.
Key Words: urban informality, land reclamation, urban expansion, informal real estate markets, housing

INTEGRATE THE DIVISION AND THE CITY: FORCED LABOR, URBAN DEVELOPMENT, AND THE RESCALING OF STATEHOOD IN XINJIANG’S TOTALITARIAN TURN

Abstract ID: 234

Research in Motion (RiM)

RESTREPO, Lauren [Bryn Mawr College] lrestrepo@brynmawr.edu, presenting author

Following a spate of both targeted and mass-casualty attacks by ethnic Uyghur extremists, Xi Jinping personally visited Xinjiang in mid-2014 to re-assess governance in the region. The ensuing crimes against humanity – including a wave of mass ‘re-education’ within concentration camps that has since evolved into a population-scale program of coerced labor - have been well documented by activists and international media. This project triangulates planning, statistical, and remote sensing data to shine a light on the nearly opaque relationship between the imprisonment and modern enslavement of Uyghurs and the economic and spatial development of the Xinjiang Production and Construction Corps (XPCC): a corporatized paramilitary institution unique to Xinjiang, and one that reports directly to the highest levels of the party-state.

In the wake of the 2012 launch of a policy to “Integrate the Division and the City” (师市合一), the State Council chartered a spate of new cities throughout XPCC territories.

In the decade since, I argue that the XPCC has become the principal agent of an experiment ‘carceral urbanism’: a variety of city-making that takes as its economic base and organizing logic the disciplining of imprisoned bodies and the management of their coerced labor.

Carceral urbanism in Xinjiang is proceeding according to plan. But whose? This project begins by building a narrative of the Corps’ post-2009 development policies and plans, paying particular attention to the ways in which discourses on growth vary by region (northern vs. southern Xinjiang) and by institution (central government vs. territorial government vs. XPCC itself). The second phase of this project involves geospatial analysis of the region-wide relationship between the XPCC and spaces of confinement. I both geo-reference XPCC maps and bring together multiple sources to create the most comprehensive publicly available georeferenced dataset on Xinjiang’s network of prisons, re-education camps, and spaces of forced labor. From this, I am able to determine the precise extent to which the XPCC is directly involved in a regional prison-industrial complex that has grown exponentially since the July 2009 Urumqi Riots.

Finally, I examine the gaps between urban master plans and changing land-use practices in two cases of new-build XPCC cities: The Eight Division’s Tumxuk (图木舒克, near Kashgar) and the Thirteenth Division’s Nova City (新星市, near Hami). I use remote sensing (RS) data to assess land-use changes with regards to both built-up and agricultural land since 2000, with particular focus on the post-2014 period. From preliminary analysis, there appears to be little significant change in agricultural land use – a finding in line with city and XPCC-level planning documents that call for stable output in the primary (agricultural) sector but massive growth in the tertiary (service) sector. In contrast, RS analysis indicates a profound growth in built-up land since 2009. Preliminary analysis suggests that the timing and direction of urbanization in these spaces has little to do with forward-looking city planning documents – and everything to do with the siting of prisons and camps in these new cities.

Citations

Recent estimates suggest that nearly 200,000 people in Delhi work in the informal waste sector (Chintan 2018) to collect, sort, segregate and retrieve recyclable material from the huge quantum of waste generated per day. The sector has grown as a result of the consumption boom in the past three decades, alongside the parallel rise in informalization of employment in the city. From the mid-2000s onwards, there have been several attempts to streamline the waste chain from collection to disposal by contracting out to private companies which promise ‘efficiency’ and ability to scale up as needed. Recently, ‘dhalaos’ which are neighborhood collection points, and a primary site of work for waste pickers, have been closed down-a move that is justified on the basis of both their unpleasant visual and sensory quality, and the claim that so many localized centers are no longer needed once collection and disposal have been adequately mechanized by the private actors. At the industry level, Gill (2009) has pointed to the closure or shifting of long-standing recycling markets to urban peripheries, which has had a disruptive effect on the entire waste chain.

This paper seeks to analyze the spatial effects of dump closure in a single municipal ward in North Delhi. How are local geographies of waste work affected by the contracting out of waste management to a private company? When existing sites of waste work are either closed down or are no longer accessible to informal workers, how does the local economy rearrange? The analysis will trace the labor and financial costs that are added for waste pickers and the additional precarity in having to work on public sidewalks, private residential colonies or bring the material to their own settlement for further processing. Through semi-structured interviews with company personnel and workers engaged in different levels of the local waste chain, the analysis will unpack the forms of labor that constitute both the “formal” and “informal” parts of the waste management system. In doing so, the paper will borrow from and contribute to the framing of “infrastructural labor” as a generative way to analyze how infrastructural gaps are devolved onto laboring bodies in cities of the global South (Robinson 2018; Gidwani, 2015).

Citations


Key Words: waste, privatization, labor, infrastructure

"SOLIDARITY NOT CHARITY": RETHINKING FLOOD RELIEF FROM A FEMINIST PLANNING PERSPECTIVE

Abstract ID: 683
As the climate crisis escalates, with its multi-faceted and varying manifestations across the globe, feminist scholars point to the importance of contextually grounded, participatory, and transformative climate adaptation approaches that foreground social justice and equity (Sultana, 2022). While feminist planners have highlighted insurgent (Miraftab, 2009) and indigenous (Porter, 2010) planning as situated and alternative knowledge production and practices, there is a dearth of research that ties feminist planning practice to climate adaptation, and specifically to disaster relief processes. This paper explores what feminist climate adaptation looks like in practice using flood relief efforts in Pakistan in response to the historic floods of June 2022. Through social media analysis and in-depth interviews with two feminist grassroots organizations: Women Democratic Front (WDF) and Madat Balochistan, engaged in flood relief, I delineate the unique contributions of feminist adaptation practices and the challenges therein.

Drawing on concepts of situated knowledge (Haraway, 1988), intersectionality (Crenshaw, 1991; Kaijser and Kronsell, 2014) and feminist praxis (hooks, 2000), I delineate the contributions and challenges in feminist climate adaptation practice. Feminist grassroots actors manage to access communities that are left out by government-sponsored relief activities and provide contextually specific relief goods and services in comparison. I also find that these actors are actively transforming discourse on relief by challenging relief as short-term charity and instead promoting the concept of long-term solidarity. These actors are, however, challenged by concurrent activities of government and donor-led adaptation plans that remain experts-led and employ technocratic, scientific approaches to adaptation that are divorced from communities’ contexts. By explicating an alternative to professional climate adaptation practices, my research findings help planners broaden their understanding of, and envision climate adaptation planning which is contextually grounded and can deliver socially just and equitable planning outcomes.

Citations


Key Words: Adaptation, Feminist planning, Grassroots, Floods, South Asia

DEEPENING THE MUNICIPAL STATE: UNPACKING THE POLITICAL POSSIBILITIES OF AN URBAN JOBS GUARANTEE IN INDIA

Abstract ID: 973

The institutional weakness of elected urban local governments in India has long been touted as a key factor in producing poor, slow or deeply unequal infrastructural development and policy outcomes in the country’s numerous megacities. While critiques of the extant planning paradigm have focused on allocative mismatches – “plans without funds and funds without plans” (Krishnankutty, 2018) – relatively little scholarship has sought to link the potentialities of reorganizing state-city relations to wider social science debates on the contours of caste
and ethnic politics within Indian democracy. With the shift of policy focus post-pandemic onto the deep structural inequalities and absence of social protection within cities, a new moment of possibility has been created to examine what the demand for a meaningful process of municipal democratization might look like (Bhan et al, 2020). Central to this question is the emergent demand and conversation around an “urban jobs guarantee” – a city-based equivalent of India’s much-discussed National Rural Employment Guarantee Act (NREGA).

Bringing together two separate literatures – debates within ‘southern’ development planning theory and Indian social and political theory – this paper seeks to unpack the ways in which urban government in India might evolve the capacity to move beyond its limited role as service provider to that of welfare planner. Concomitantly, and rather more importantly, it seeks to unpack why this transition might be central to enabling the possibility of post-identitarian political publics in India rallied around different forms of claims-making. By examining the relationship between socio-political identity formation and the extant institutions and operational mechanisms of electoral and state power in India, this paper will seek to argue that the depoliticization of urban local government is a key node in the operation of electoral caste and religious arithmetic. By expanding and enabling a form of urban state capacity to function as a welfare provider through a jobs guarantee, possibilities could emerge for a renewed and invigorated form of urban claims-making that democratizes the functioning of the local state (Holston and Appadurai,1999). Indian electoral politics, that has long incentivized the rural as the authentic site for political claims (and, by extension, identity formation) might see the development of a new possibility: the urban as a core site for the formation of different electoral publics.

The paper is a work-in-progress offering theoretical reflections on over 7 years of field work on urbanization, labor and social protection in India and 2 years of doctoral coursework on Planning and Urban Theory. While drawing on a number of insights, observations and findings about the relationship between policy and politics gleaned from both primary ethnography and secondary sources, the paper seeks to open newer theoretical debate about the stakes of planning and public action in the post-covid policy environment. While the language of jobs-creation and transitions to non-farm work have predominated development and regional planning debates on India (and the global south more broadly) for a number of years, the overwhelming focus on quantitative methods and demographic projections have somewhat undermined the more substantive questions about changing regimes of citizenship, claims-making and the politics of representation that undergird, enable, resist, subvert and negotiate existing paradigms of technical planning and capital accumulation. This research is an attempt to fill that gap: making the case for the ethnographic method as an invaluable tool in the arsenal of the planner committed to reconciling the technical challenges of policy action with the ever-evolving contours of political life in deeply unequal democracies.

Citations


Key Words: Jobs, Development, Social Protection, Policy, Global South

LOCAL STAKEHOLDERS, WORKFORCE, AND LEADERSHIP PERCEPTIONS OF THE GREAT GREEN WALL IN SENEGAL

Abstract ID: 1126
Research in Motion (RiM)
British forester Richard St. Barbe Baker first proposed an antecedent to the Great Green Wall for the Sahara and the Sahel Initiative (GGW) in the 1950s as a 50-kilometer-deep shelterbelt encircling the Sahara Desert to stop its spread into arable lands, but his vision would not come to fruition for another half-century. In 2007 the African Union adopted a modified version of his idea—an 8,000-kilometer wall of trees 15 kilometers in depth across eleven nations running the breadth of the continent. Due to environmental constraints and past failures (Steiner et al. 2019), the project pivoted to restoring 100 million hectares of grasslands, shrublands, and forests across a similar boundary while pursuing 15 of the 17 United Nations Sustainable Development Goals. Interestingly absent from these targets is goal 11, sustainable cities and communities. Yet one of the unsung drivers for this initiative is to keep people from migrating to rapidly forming cities or abroad. In some places, the GGW’s approach is beginning to retain residents. So there is an increasing need in the surrounding communities and GGW interventions for greater spatial planning and recognition of local interests to continue to drive its mission forward.

Since the mid-1960s planners have advocated for greater participation of underrepresented groups in top-down procedures, following in the wake of Paul Davidoff and Sherry Arnstein (Hack et al. 2009). This applies to the GGW, where national and even international interests often run antithetical to local wants and needs. In a working paper by Marie Gravesen and Mikkel Funder, the authors recognize a need for this initiative to move beyond studying and measuring technical successes to fill a major gap in qualitative studies on the topic of "socio-ecological analyses of contexts around project sites" (2022, p. 9). This paper begins to fill this gap by analyzing forty-eight in-person interviews with local stakeholders, leadership, and the workforce in the Djoloff region of Senegal, listening to their thoughts on this mega-eco project’s social and environmental performance. To decolonize my research methods, I followed Chilisa Bagele’s (2011) sagacity model and asked village elders (sages) about their perceptions of place and the project, first checking to see whether their beliefs about climate change, biodiversity loss, and outward migration match the literature written frequently by outsiders (Bagele 2011). I then asked the elders how the GGW utilizes and affects them, their environment, and their community. I also interviewed national and local leaders and the newly established youth workforce (Keyu Ndag Ni) for their impressions of the GGW and to measure citizen participation to see where differences and similarities in opinions arose.

The GGW is an extraordinary work that seeks to reverse the effects of desertification at the frontline of climate change. Where the project takes place in the Sahel, the region’s population is rapidly growing. In 1950 when Baker first proposed the GGW vision, an estimated 31 million people lived there. Today, there are well over 100 million people, and by mid-century, the United Nations expects this figure to rise to 340 million (Potts et al. 2013). As desertification results from poor land use decisions, overpopulation, and excess carbon in the atmosphere, the GGWs mission is urgent and pressing. This paper creates the groundwork for future planning by determining local stakeholders, workforce, and leadership perceptions of project performance and challenges the written literature with testimony from local sages. To realize its goals, retain its residents, and improve its outcomes, this paper also discusses the need for environmental, city, and regional planners, along with the allied design fields, who have tangible skills to strengthen the implementation of this work.

Citations

Key Words: Nature-based Solutions, Climate Justice, Environmental Planning, International Development Planning, Regional Planning

PLANNING WITH/IN EXCEPTION: LAND COMMODIFICATION IN KOLAR GOLD FIELDS
Abstract ID: 1202
Research in Motion (RiM)

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Industrial belts hosting state-owned enterprises in the Indian subcontinent, especially those related to mining, are spaces delineated by temporality, exceptionality, and, paradoxically, permanence. Temporary, as they are subject to governance that has evolved in accordance with the temporalities of the resource industry. Exceptional, as these regions demonstrate complex layers of sovereignty instituted initially by colonial mining companies and later national and state governments, that leverage bureaucratic ambiguity—especially with regards to land tenure—to its maximum advantage. Permanence, as resource belts frequently overlap with ‘reserved constituencies’—reserved political positions in the Indian Parliament and State Assemblies, that are linked to geographically-defined electoral districts and premised on affirmative political action for protected groups. In the face of ongoing disinvestment in Public Sector Units (PSU) and state-led land acquisition in resource frontiers (Lahiri-Dutt 2014), this ongoing research explores what planning looks like in such spaces of citizenship and struggle, that have emerged ‘as an accident of geological history’ (Watts 1998).

To this end I use the extended case method to examine Kolar Gold Fields (KGF), a resource-rich borderland and reserved constituency in Karnataka State, in southern India. Initially established as colonial parastatal administered by a British corporation, the gold mines at KGF were nationalised and restructured in 1956 and subsequently incorporated into Bharat Gold Mines Limited (BGML) as a public sector unit (PSU) in 1972. Gold production steadily dipped in the years after nationalisation, and after the closure of BGML in 2001, the region stagnated. Efforts to acquire the township, as part of the national push for land commodification, through the creation of new economic corridors and corridor cities is currently underway—albeit in the face fierce resistance from locals (Balakrishnan 2019).

On one hand, it is possible to frame KGF within the larger trajectory of D/development planning (Hart 2001) in Southern states: as an inevitable shift from the postcolonial project of intervention premised on the Keynesian welfare state to ‘small d’ development through the financialisation of land and the liberalisation of the industrial sector. Alternatively, we can see these unpredictable encounters and contestations as what Vanessa Watson terms ‘the nature of the ‘interface’ between two important imperatives: that of survival and that of governing’ (Watson 2009, p. 2261)—thereby expanding possible approaches to planning.

Citations

In the last decade, disaster studies have seen an increase in the applications of the concept of social capital to understand the non-linear nature of recovery (Aldrich, 2012; Uekusa, 2017). A vast body of literature highlights the effects of community social capital on post-disaster recovery (Aldrich, 2012; Partelow, 2020). However, less is known about the differential distribution of social capital among flood-affected households and its impacts on their recovery in lower middle-income nations. Social capital is often examined at the community level and is defined as a collective rather than a resource specific to individual households. While recovery following disasters is a well-studied topic, recovery studies using an economic well-being approach are limited in number. More work is needed to understand how different forms of social capital contribute to resilience at the household level and how well pre-event social capital can predict recovery (Aldrich, 2015). To address this knowledge gap, I study post-disaster recovery in relation to the bonding, bridging, and linking social capital at the household level. Additionally, I move beyond conventional property damages and investigate the recovery of households in terms of economic well-being impacts - changes in income, consumption, and household assets. India is one of the most flood-affected countries globally, and floods have caused tremendous damage to life and property, providing a suitable site for research.

Highlighting the importance of social capital on recovery, the empirical literature argues that social capital, during and after disasters, provides households with access to information, resources and informal insurance against uncertainties. It also helps them enhance their social cohesion, identify and implement coping strategies, mobilize external resources, and enable collective action (Aldrich, 2012; Partelow, 2020). Additionally, studies find social capital improves post-disaster government responsiveness to household demands (Aldrich, 2012). However, current studies do not adequately capture the complex and dynamic effects of the household level social capital on their recovery. As a result, this study answers the following question: What role do pre-disaster bonding, bridging, and linking social capital play in the recovery of households across multiple dimensions - income, consumption, and household assets?

I will adopt a multi-event approach, focusing on the flooding events that impacted the states of Bihar, Maharashtra, and Andhra Pradesh in India. I will use the India Human Development Survey (IHDS) - the only comprehensive, publicly available national panel dataset from India. The first round of surveys was conducted in 2004-05, and the second was conducted in 2011-2012 and re-interviewed around 83 % of households from the first round.

Methodologically, I will use structural equation model (SEM) to assess the effects of pre-disaster social capital on the recovery of households. Using SEM will help me deal with measurement error and get closer to the theoretical construct of interest - social capital. I will use confirmatory factor analysis (CFA) to measure social capital at the household level - bonding, bridging, and linking. CFA is well suited for this type of analysis as it can confirm whether the latent social capital variables in the model are valid. Additionally, the observed variables in IHDS used to measure different types of SC contain random measurement errors, but the latent variables will be free of those. Finally, I will regress the latent variables on economic well-being indicators (income, consumption, and assets) to understand the role of social capital on recovery.

This study empirically contributes to the literature on household resilience in three ways: (1) by moving beyond the property-based operationalization of recovery, (2) by operationalizing social capital as a latent construct, and (3) by studying the effects of different types of social capital on recovery of the household.
How does a city provide a public good, like access to water, while making it financially viable and sustainable? As part of research for my book Water Stories, I am exploring patterns, institutional arrangements, sequences and hidden and unexpected outcomes of water interventions in cities in South Asia, particularly India, drawing lessons as well, from other select global cities around the world.

In this short Research-in-Motion presentation I will focus on two cases of cities in very different parts of the world – New York city and the city of Surat in Gujarat, India, that took an inverted sequence in terms of strategy and pricing in distributing water to their residents. Instead of providing piped water to households that paid volumetric tariffs based on the water they used, and then gradually extending the piped and metered network to other parts of the city, as is popularly advocated today, both cities started by charging flat rates for water supplied and focused on securing and augmenting source water resources while steadily expanding their network coverage across the city. It was only much later, after the bulk of the city was covered and served, that local water agencies began to meter individual (or group) connections and charge volumetric tariffs. In both cases this strategy needed creative institutional arrangements to curb corruption, access sufficient capital and secure source water supplies. In both cases the innovations came in the wake of severe crises of bureaucratic performance as well as natural distress (e.g., contamination, and the need to manage endemic urban flooding). In New York City’s public water system the historic turning point was the introduction of its unique mechanism of separating yet closely yoking the funding arm of the water system from the implementing agency and hiring Wall street executives to raise funds and manage debt. In Surat city it was a series of municipal bonds following a water related health catastrophe in the city. This paper will outline the political economy and institutional sequences that have helped generate water systems in both cities that remain strongly financially healthy and viable, while providing extensive piped water coverage to their residents.

Citations

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Key Words: Water, Communities, Institutions, funding strategies, Cities
PUBLIC INVESTMENT AND GENTRIFICATION: A CONUNDRUM FOR PLANNERS
Pre-Organized Session 19 - Summary
Session Includes 138, 140, 141, 142

Research has shown that under some circumstances, public investment such as new rail transit, parks, and bike lanes has contributed to gentrification and displacement. These processes create an important conundrum for planners: How to provide services in low-income communities without increasing displacement? The findings of the literature on public investment and gentrification are mixed. Some studies show that gentrification precedes the installation of new bike lanes, and that bike lanes do not lead to further gentrification. Different types of public investments have disparate effects on gentrification and displacement. And limited research has focused on strategies to prevent displacement fostered by public investments. This pre-organized session will add these debates by answering timely questions about public investment and gentrification. Under what circumstances do public investments result in gentrification (and/or displacement)? Does gentrification also precede public investments? What can be done to proactively address displacement when investing significant public money in low-income communities of color?

Objectives:

- To identify what level of risks that different public investments pose to gentrification and displacement
- To disentangle whether gentrification also precedes public investment (in addition to following public investments)
- To identify strategies to limit displacement fostered by public investment

DOES GENTRIFICATION PRECEDE AND FOLLOW GREENING? EVIDENCE ABOUT THE GREEN GENTRIFICATION CYCLE IN LOS ANGELES AND CHICAGO
Abstract ID: 138
Abstract within Pre-Organized Session 19

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Introduction. Green gentrification describes the influx of wealthier residents to previously disinvested neighborhoods due in part to the creation of new green spaces. Often leading to the displacement of low-income residents, green gentrification is one of the most wicked issues that planners face in growing cities worldwide.

Most studies show that gentrification follows greening initiatives, but recent research suggests that gentrification might also precede greening. Based on this research, we presented the “green gentrification cycle,” suggesting
that gentrification might both precede and follow greening. Specifically, newcomers and developers might advocate for park investments in gentrifying neighborhoods. No study to date, however, has systematically evaluated under which circumstances the green gentrification cycle might occur.

Research goals. First, we examine whether new park investments went disproportionally to areas that have shown signs of gentrification before the establishment of new parks. Second, we study whether gentrification follows park investments in the two cities. Third, we investigate whether evidence for the green gentrification cycle is particularly strong for new regional parks, which receive significantly larger investments.

Methods. Focusing on Los Angeles and Chicago, we model whether gentrification preceded and followed the opening of new parks built in 2010-2021 in gentrification-eligible census tracts (median household income below the cities’ median in 2010). We use data from the Trust of Public Land for park location and year of establishment, and data from Zillow’s ZTRAX for the sale prices of single-family units sold before and after park establishment. We categorize properties as “treatment” properties if they are within a half-mile of a new park, and as “control” properties if they are beyond a half-mile.

Following other research, we build hedonic models where the dependent variable is the natural log of the inflation-adjusted sale price of single-family homes, and the main independent variables are interaction terms between the treatment/control variable and the year of sale relative to the year of establishment of the closest park. We control for property characteristics (e.g., square footage) and neighborhood characteristics (e.g., location, demographics) that affect property values. We also run specific models for new regional parks built in 2010-2021.

Results. We find some evidence of gentrification preceding greening in both Los Angeles and Chicago, and more evidence of gentrification following greening in Los Angeles than in Chicago. Specifically, sale prices in control properties were statistically significantly higher than in treatment properties for the seven years before new parks were open in Los Angeles. During those seven years, sale prices saw statistically significant increases in treatment properties and significant decreases in control properties, suggesting that gentrification-eligible areas within a half-mile of new parks have gentrified before the parks’ opening. Chicago saw a similar pattern but not as striking, with sale prices in treatment properties rising more rapidly than prices in control properties. After the opening of new parks, we find some evidence of gentrification following greening but not as strong as the evidence of gentrification preceding greening. Results for models focused on new regional parks show similar trends to models focused on all new parks.

Implications. Our results suggest the importance of considering gentrification patterns both before and after greening. Specifically, planners could prioritize efforts to stave off gentrification and displacement before new parks are built in disadvantaged communities rather than after parks are built. Also, planners could direct park investments to disadvantaged communities that are not experiencing gentrification to limit the risk of displacement.

Citations


Key Words: Green space, Gentrification, Environmental justice, Equitable development, Urban sustainability

IS ‘JUST GREEN ENOUGH’ ENOUGH? SUCCESSES AND FAILURES OF ANTI-GENTRIFICATION PARK PLANNING IN MINNEAPOLIS
Abstract ID: 140
Abstract within Pre-Organized Session 19

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Across the U.S., communities of color and low income communities have fewer and lower quality parks than their whiter, wealthier counterparts. However, investments in new parks spaces to address this persistent urban environmental injustice have been linked to rising rents and property values, which can displace the very people the improvements had originally intended to serve, a phenomenon known as green gentrification. In response, some scholars propose “Just Green Enough” (JGE) as an alternative to standard approaches to urban greening that aims to curtail the potential for green gentrification (1,2).

Originally emerging from a case study of neighborhood redevelopment following the clean-up of a superfund site in Brooklyn, New York, researchers have increasingly used JGE to examine park development and investments in urban nature more broadly (3). Despite growing scholarly interest, there are very few examples of decision-makers explicitly using the concept in planning practice, and key questions about if, how, and why to operationalize JGE remain (4). Here, we examine a case study in which a “Just Green Enough” strategy was explicitly deployed in a planning process for the Upper Harbor Terminal, a new riverfront park in Minneapolis.

The Upper Harbor Terminal site is located at a former barge shipping terminal through which industrial materials were moved into and out of Minneapolis. The site is located in North Minneapolis, a neighborhood that is one of the lowest income and most racially diverse neighborhoods in the city with limited access to greenspace and high rates of industrial pollution. Community members describe the Upper Harbor Terminal re-development as a “once in a lifetime opportunity” to create new access to advance environmental justice in North Minneapolis. However, the development has been extremely contentious due to fears over gentrification tied to the re-development.

Drawing on participant observation, interviews with planning staff and community members, and review of planning documents, we discuss how participants operationalized JGE and the political possibilities JGE enabled and foreclosed. We find that JGE was operationalized by Minneapolis park planners as a strategy of iterative park development based on on-going community engagement. Activists and community members attributed a diverse range of definitions to JGE, allowing the concept to serve as a boundary object through which diverse political standpoints could find a common vision for the park. In this context, JGE became a powerful tool for coalition building in a divisive park development. However, because the JGE concept remained poorly defined, this left the concept open for co-optation. Further, community members and park board planners raised concerns about structural barriers to carrying out a JGE strategy. Broadly, this case study draws our attention to issues of scale and power in park development.

Citations

TIPPING POINT: WHEN DOES DISPLACEMENT OCCUR WITHIN TRANSIT-INDUCED GENTRIFICATION PROCESSES?

Abstract ID: 141

Abstract within Pre-Organized Session 19

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Gentrification is a complex and detrimental neighborhood change process occurring across U.S. cities. New transit investments have been shown to induce this change process whereby new transit investments are expected to be the cause of both neighborhood upgrading and residential displacement (Baker, Lopez, & Greenlee, 2021; Dawkins & Moeckel, 2016). This proposed research defines gentrification as a process of neighborhood change characterized by upgrading/revitalization and displacement at rates greater than the city or area average. Here, displacement is an inherent part of gentrification and distinguishes gentrification from neighborhood revitalization or incumbent upgrading. Not including displacement in defining and operationalizing gentrification can alter perceptions of, and potential policy recommendations regarding, gentrification whereby cities or regions support gentrification without accounting for its negative impacts (Bernt & Holm, 2009).

With this, one underlying issue remains in gentrification, and especially transit-induced gentrification, research. Most quantitatively-based research remains static, largely analyzing whether or not a place experienced gentrification over a set period with large-scale public investments such as transit often used to delineate the beginning or ending of gentrification (Zuk, et al., 2018). However, existing research overlooks the intricacies of the change processes actually occurring within the period examined – like when displacement or revitalization occur and whether such processes overlap.

Thus, I seek to enhance gentrification studies by asking and answering: When do displacement and different aspects of neighborhood change occur in transit-induced gentrification-related neighborhood change processes? That is, when is the tipping point when upgrading/revitalization makes way for displacement, or vice-versa? I use difference-in-difference (DnD) models and descriptive statistical analyses focusing on 10 U.S. urbanized areas that opened light rail stations between 2000 and 2010. DnD models are used to identify gentrified LRT station areas and descriptive statistics are used to identify residential changes associated with displacement in the LRT station areas.

Preliminary results suggest that: 1) gentrification was not common within light rail station areas; and 2) in places where gentrification did occur, displacement is more likely to occur in periods well (+5 years) after the opening of the light rail station. Practically, then, planners and local decision-makers, through policy measures, could intervene by demanding time-lines for affordable housing initiatives like building a set amount of units for existing residents, enforcing anti-eviction measures, or demanding displacement protections for gentrifiable neighborhoods be implemented within specified time-frames. Methodologically, this research aims to influence future studies by including a method for understanding the gentrification process instead of just the identification of a gentrified space.

Citations
Cities in the United States, and in California in particular, are facing twin crises of transportation-induced climate change and a lack of affordable housing. One strategy to address these crises is increasing residential density with a variety of housing types near high-quality transit areas, enabling more people to travel places without a car to reduce vehicle-miles traveled (VMT). A concern with this strategy, however, is that existing residents who live near high-quality transit areas—who tend to be lower-income or people of color—will be displaced as these areas gentrify by attracting wealthier individuals who place a premium on access. To date, most of the research on transit-oriented development (TOD) and gentrification or displacement has focused on the effects of denser development near rail transit. A review of this literature finds evidence that development proximity to rail transit is likely to induce gentrification, but this effect is dependent on the local context and is not a forgone conclusion (Padeiro, Louro, and Costa 2019; Baker and Lee 2019). In any case, the effects of TOD on VMT are not so clear: higher-income households that move into rail-adjacent areas drive less, but lower-income households and households displaced to new locations drive more, highlighting the need to increase density outside of rail corridors (Chatman et al. 2019).

In California, recent legislation allows for increased density by right in areas previously zoned as single-family, permitting the construction of small multifamily dwellings. New laws encourage even denser development in transit-rich areas, including along high-quality bus corridors. There is little work examining how densification strategies associated with non-rail TOD, such as those newly enabled by these laws. This study, as part of a larger mixed-methods study, aims to identify effective densification and anti-displacement strategies for areas that currently lack rail transit access to promote more equitable development in areas with varying characteristics.

In this exploratory research, we are conducting semi-structured interviews with twelve policy actors in transportation and housing to understand the barriers to implementation of effective and equitable densification strategies in areas that lack rail access. Interviewees include policy experts, policy creators, policy implementers, and policy advocates who work at academic institutions, transportation agencies, and non-profit organizations that work in different cities across California or work on statewide policy. Interview questions vary by policy actor, but include discussions of neighborhood context for development, the role of transportation in gentrification and displacement, and coordination needed to implement effective densification strategies. We are conducting a thematic analysis of the interviews to identify the themes that concur or are discordant across the categories of

Key Words: Transit-Induced Gentrification, Displacement

BUS-ORIENTED DEVELOPMENT AND DISPLACEMENT: PERSPECTIVES FROM POLICY, ADVOCACY, AND PRACTICE
Abstract ID: 142
Abstract within Pre-Organized Session 19

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Interviews are in progress and will be completed by May 2023. Results from the initial interviews highlight the importance of the local context in developing appropriate strategies for meeting transportation needs while mitigating gentrification and displacement pressures and providing affordable housing. We expect the results of this work to be relevant for policymakers seeking to diversify or strengthen anti-displacement strategies in high-quality transit areas.

Citations


Key Words: Transit-oriented development, Gentrification, Equity

MARKET DEVICES AND REDISTRIBUTIVE PLANNING
Pre-Organized Session 26 - Summary
Session Includes 372, 373, 374, 375

Market devices have gained immense popularity amongst planners and planning institutions across the world as a way of addressing social and ecological planning goals. Examples include tax credits (Kay and Tapp 2022), payments for ecosystem services (van Maasakkers 2021), and transfer of development rights (Shih et al 2019). This panel is a critical interrogation of these market devices, with an emphasis on planning actors and institutions. Who does what in these hybrid regimes of planning, and how do these instruments reshape the already contested planning keywords including public-good, social welfare, and redistribution. Furthermore, we are keen on tracking longer (including Cold War) genealogies of these instruments with the intent of understanding how knowledge practices and legal norms that emerge during prior conjunctures inhere in normalized regimes of social and ecological planning.

Objectives:

- To better understand the origins, current practices, and political economic effects of market devices used in planning to trade locations, credits, and liabilities for development

DEVELOPMENTALIST CITY: HOW THE “EQUALIZATION LAND RIGHTS FUNDS” TOOL FINANCES AND FINANCIALIZES THE URBAN IN TAIWAN
Abstract ID: 372
Abstract within Pre-Organized Session 26

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In this article, we examine a crucial but overlooked fiscal tool—the Equalization Land Rights Funds (pingjun diquann jijin, hereinafter ELRF)—and discuss how it has worked since World War II to enable municipalities in Taiwan to quickly incorporate large swaths of private lands of industrial sites, farmlands, or any other low-intensity, mixed uses—usually on the city’s outskirts—into highly intensified and marketized real estate property development.

ELRF originates from Sun Yat-sen, the founding father of the Republic of China and a follower of Henry George’s teaching on taxation of unearned land rent. Sun’s Ming Sheng (the People’s Livelihood) principle stipulates, in essence, that increases in land value should be appropriated by the state through various measures even though land itself is not formally confiscated (Schiffrin, 1957). Present in both official text and popular discourse, Sun’s original aspiration is commonly referred to as “land benefits for public sharing” (dili gongxian). This article aims to bring to the foreground how the state, both at the central and local level, has wielded ELRF in a fashion that renders land development what Timothy Michell calls “a politics of techno-science” (2007, p. 15) even though “public sharing” and the distribution of land benefits have increasingly been highly contested as Taiwanese society seeks more democratic and socially just practices of land.

Since its inception, ELRF’s most important function has been to jump-start developmental initiatives of the state. Local governments draw from ELRF to cover the costs of usually large-scale development projects and then pay them back later, after developable land parcels are market-auctioned to highest bidding private developers.

However, not all forms of land development are eligible for or favored by ELRF. Legally, the government-led, eminent domain-like scheme of land readjustment is guaranteed with financing start-up from ELRF. While the local council has the power to review and approve ELRF budgets, it is the central government, but not local elected representatives of the council, that holds the final power to greenlight or deny ELRF-funded land readjustment projects. This is the technocratic framework of decision making within which municipal planners need to operate. In other words, ELRF finances a mode of land development that is inherently top-down, state-led, compulsory, and undemocratic.

Focusing on New Taipei City, which has used ELRF heavily, we seek to shed light on the following three related questions: First, how has the technique of self-financing in land readjustment schemes allowed the state to use ELRF to indiscriminately fund both major infrastructure building as well as real estate property-driven development while deflecting political questioning regarding “who is in the public?” (Otsuki, 2019; Salakrishnan, 2019). Second, how do ELRF-funded land readjustment projects enable local governments to leverage them as what Rachel Weber calls “sublocal fiscal enclaves” (2002, p. 533) to create conditions for citywide property development? Third, how does land readjustment tie speculative urbanism to what Anaya Roy calls the paradigm of propertied citizenship (2003), thus deepening the effects of privatization and financialization on the urban while ELRF’s fiscal and political powers continues to grow? We conclude the article by discussing how recent contestations of speculative urbanism have formed social demands and a new politics of land that may lead to possible reforms to ELRF-financed land readjustment.

Citations


Key Words: Fiscal tool, Finance, Land Value, Land Readjustment, Public Interest
TRADING AIR: MAKING MARKETS FOR THE TRANSFER OF DEVELOPMENT RIGHTS (TDR)
Abstract ID: 373
Abstract within Pre-Organized Session 26

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Transfer of Development Rights (TDR) are a form of assetization (cf. Birch and Muniesa, 2020) that creates a market for the property rights in the air above a plot of land. TDR makes it possible to delink the development rights from a plot of land, transfer these rights across space, and assemble them at another location (Balakrishnan and van Maasakkers, 2021). This research historicizes TDR instruments in the modern zoning laws that emerged during the Cold War era, thus exposing unexpected lineages from earlier struggles around decolonization and empire. In New York City and other urban cases, the emergence of TDR relied on the land-use mechanism of FAR (Floor Area Ratio) as an inscription device for commensurability (Li 2014). Expertise from planning, architecture, law, public administration, public relations and the social sciences was used to construct this distance between the socio-material reality and the technical and fungible representations of land using rationales of modernization, streamlining, and equality (cf. Mitchell 2002). This paper is particularly interested in connecting the emergence of TDR with other market-based instruments such as ecosystem services, and to understand how these ideas circulated to and from New York to other cities from the 1950s to 1970s. This paper relies primarily on archival research involving approximately 4,000 pages of documents from New York City Mayors and Planning Commissioners between 1956 and 1989. By excavating these institutional lineages of TDR, this paper re-politicizes this seemingly neutral land-use instrument, and interrogates the new forms of urban inequalities generated by it.

Citations


Key Words: Markets, Land use, Planning history, Expertise

MARKET DISTORTIONS: TOWARDS AN ETHNOGRAPHY OF THE SOCIOTECHNICAL INFRASTRUCTURES UNDERLYING EXPERIMENTAL APPROACHES TO HOUSING PRODUCTION AND PROVISIONING
Abstract ID: 374
Abstract within Pre-Organized Session 26

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Housing affordability growing to crisis levels in various metro regions in the country is fundamentally related to experimental approaches to new construction and provisioning. This paper analyzes three, vastly different trends in urban and real estate development through the lens of science and technology studies. First, in the case of cultural preservation strategies in San Francisco, I treat zoning overlays as a techno-legal substrate through which development proposals must traverse during the permitting process. Secondly, I look at how digital tenant screening services, which fall under the umbrella of property management technology, are a profound black box that fundamentally challenges society's ability to enforce Fair Housing laws. Finally, I discuss monitoring and
evaluation processes within a longitudinal, public health study about the impacts of providing stabilized housing to vulnerable populations in southeastern Massachusetts. The study is financed through multiple rounds of closed-end, private equity funding, which broadly fall under the category of “ESG” funds, which are governed by environmental, social and governance frameworks currently trending in investment circles. Inspired by the ethnography of infrastructure literature, this paper is an attempt at understanding the linkages, dependencies and slippages between complex, macro-structural forces and the micro-agential phenomena shaping housing availability, access and affordability.

Citations


Key Words: housing, science and technology studies, ethnography of infrastructure

ENACTING “GOOD” COMMUNITIES? THE MORAL ECONOMY OF FLOOD RISK REDUCTION IN THE NATIONAL FLOOD INSURANCE PROGRAM’S COMMUNITY RATING SYSTEM

Abstract ID: 375
Abstract within Pre-Organized Session 26

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This paper explores the relationship between price incentives and community-level resilience to climate change. It does so through a case study of the National Flood Insurance Program’s (NFIP) Community Rating System (CRS), a price mechanism which awards insurance premium-reducing credits to participating communities that undertake specific flood-risk reduction measures. The CRS is contentious: scholars and policymakers have identified it as both an obstacle to, and effective in, developing and scaling up climate resilience in the United States. Proponents suggest that CRS participation reduces NFIP claims and can help prop up the embattled public insurance program as the climate changes (Highfield and Brody, 2017). Critics suggest that the CRS may encourage further floodplain development among mainly affluent populations, thereby amounting to a subsidy to the wealthy and compounding the vulnerability that the price mechanism seeks to address (Gourevitch and Pinter, 2022). This paper draws on documentary analysis and interviews with CRS participants and officers to address related, but distinct, issues: first, how and to what effect the “community” has been envisioned and enacted through the CRS and, second, how the normative commitments at work within the CRS shape participating community understandings of what “fair” flood insurance premiums and rate-making processes are, as well as what counts as “good” community behavior regarding flood risk reduction. Bringing scholarship on moral economies and science and technology studies to bear on the case of the CRS, I suggest that price incentive programs like the CRS do more than financially reward specific actions; they also shape community expectations of the future and what they “deserve” as the climate changes (see Elliott, 2021, for a related analysis). Over time, these shared temporal expectations and the morality plays undergirding them stand to introduce significant political challenges to resilience efforts: as climate change pushes CRS officials to adjust what counts as meaningful flood risk reduction efforts, participating communities may call into question the legitimacy of the CRS and other proposed resilience measures, throwing the future of flood resilience measures into sharp relief. The paper concludes by suggesting that as planners turn to price incentives when devising resilience measures, they must attend to the economic and moral work that these mechanisms do—intended and unintended alike.

Citations
OUTCOMES AND EFFICACIES OF ANTI-EXCLUSIONARY ZONING REFORMS

Pre-Organized Session 49 - Summary
Session Includes 415, 416, 417, 418, 419

“Exclusionary zoning” has been increasingly under attack for imposing arbitrary limits on housing production and perpetuating racial disparity in access to high opportunity neighborhoods. Accordingly, efforts to remove exclusionary zoning have been gaining momentum at all levels of policymaking. Three papers in this session will present findings on the impacts of upzoning, a practice that amends local zoning to increase the residential development capacity. Kim and Lee will present evidence from New York City; Dong will present evidence from Portland; Parker will present evidence from Seattle and beyond. State administrative oversight of local land use and zoning practices may also help curb exclusionary zoning. O’Neill will share how California’s administrative oversight influences local zoning reform in San Francisco. Lastly, zoning is not the only barrier to creating more housing in the right places. Zoning works hand-in-hand with discriminatory real estate practices and homeowner opposition to new housing development. Marantz will shed light on how HOAs influence the production of accessory dwelling units in California.

Objectives:

- develop an evidence-based understanding of how anti-exclusionary zoning reforms affect housing production and neighborhood characteristics

DOES UPZONING LEAD TO GENTRIFICATION AND DISPLACEMENT? EVIDENCE FROM NEW YORK CITY

Abstract ID: 415
Abstract within Pre-Organized Session 49

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As the housing affordability crisis and racial disparity in access to housing worsens throughout the nation, academics and policymakers have been embracing the idea of “upzoning,” amending the zoning ordinance to increase the allowable residential development capacity. Zoning districts that only allow detached, single-family homes have been the primary target of the upzoning efforts (Manville et al., 2020) but upzoning can occur in different forms, at various scales, geographies, and intensities (Kim, 2020; Freemark, 2020).

Emerging literature on upzoning is beginning to shed some light on the impacts of upzoning on housing development and property values, albeit with mixed results. What is unknown, however, is how upzoning initiatives affect the upzoned neighborhoods in the long run. This is because most upzonings have occurred in recent years and therefore insufficient time has passed to examine the interventions’ long-term impacts. Such a gap in knowledge is particularly concerning as scholars and practitioners have contended that upzoning will likely lead to gentrification and displacement, if not accompanied by appropriate policies to mitigate such effects (Wolf-
We address this research gap by examining the long-term effects of upzoning initiatives in New York City. During the Bloomberg administration (2002–2013), the city rezoned about 20% of the total lot area, extensively relying on neighborhood-level rezoning. Among these rezoning initiatives, we identified 49 initiatives that increased allowable residential development capacity (i.e., upzoning). Given that the timing of these policy interventions is at least a decade old, the experiment in NYC allows for an excellent case study to evaluate the long-term impacts of upzoning on neighborhood characteristics and residential mobility.

We ask if and how getting upzoned has affected residential mobility patterns among original residents and demographic, socio-economic, and housing characteristics of upzoned areas. We use a difference-in-differences (DID) design with matching methods to compare the upzoned neighborhoods with their counterpart that were not upzoned, but otherwise very similar prior to upzoning. In doing so, we construct a dataset that combines data from the decennial census, American Community Survey (ACS), and Zillow Transaction and Assessment Database (ZTRAX), among others.

We find that upzoned neighborhoods, when compared to their counterparts that had very similar characteristics in 2000 but was not upzoned, became statistically significantly whiter, wealthier, better educated, and more expensive to live in during the study period. This finding confirms the dominant narrative that upzoning will lead to neighborhood improvement, which may be due to the higher socioeconomic statuses of new residents or due to improved economic conditions of existing residents.

As our next step, we will expand our analysis to examine the impact on mobility outcomes among original residents in upzoned areas, in terms of quantity (i.e., mobility rate) and quality of residential mobility (i.e., destination characteristics). Also, we will examine whether the observed outcomes vary across 1) different types of upzoning programs, 2) existence of inclusionary housing policy, and 3) relative strength of the neighborhood’s housing market to see heterogeneity in the upzoning effects across policy instruments and local contexts.

Citations


Key Words: Land use regulation, Residential zoning, Upzoning, Residential mobility, Neighborhood change

CAN STATE LAW OPEN HOMEOWNERS ASSOCIATIONS TO ACCESSORY DWELLING UNITS? EVIDENCE FROM CALIFORNIA

Abstract ID: 416
Abstract within Pre-Organized Session 49

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A large share of owner-occupied housing units constructed since the 1960s are governed by private, non-profit homeowners associations (HOAs). HOAs can provide a variety of amenities for residents and ensure a level of maintenance services that might be unavailable from local governments. But they can also serve as tools of exclusion through their covenants, conditions, and restrictions (CCRs) which govern how HOA residents can use or modify their property. These CCRs can limit residents’ ability to use their homes as rental properties or add structures, even if these actions would be allowed under local land-use law. As a result, HOAs may defeat the purpose of recent laws adopted in several states requiring local governments to permit the development of accessory dwelling units (ADUs), which are widely viewed as a potentially important source of relatively affordable market-rate housing.

This article leverages parcel-level data on HOA coverage and ADU permits to analyze the impact of recent legal reforms in California intended to override HOA rules limiting the development and rental of ADUs. Beginning in 2016, California adopted a series of laws essentially requiring local governments to allow ADUs as-of-right on nearly all single-family parcels by 2018. But the state did not preempt HOA restrictions on ADU development until August 2019, and HOA restrictions on ADU rentals were enforceable until January 2021. Combining non-parametric matching with difference-in-difference (DID) regression, we assess whether the legal transitions in August 2019 and January 2021 affected ADU permitting on parcels covered by HOAs.

This article makes three main contributions to the study of housing policy. First, we obtain parcel-level HOA data from a private title insurance company, which provides more comprehensive and precise data than researchers have previously used to identify whether a parcel is covered by an HOA’s CCRs. As a result, we are able to better describe the characteristics of HOA-covered parcels and accurately match parcels with and without HOA coverage. Second, California legislation adopted in 2017 significantly enhanced the building permit reporting requirements for local governments, compelling cities to annually submit a spreadsheet with parcel-level permitting information beginning in 2018. We are therefore able to observe permitting changes at relatively granular scales of both time and space, facilitating our empirical strategy combining non-parametric matching with DID. Third, California’s recent legal transitions provide a unique opportunity to assess the effects of HOAs on the development of relatively affordable housing types such as ADUs. In addition to private regulation, HOAs might limit ADU development via social pressure or political lobbying. This article will assess whether state intervention can overcome these varied potential limits on housing development.

Citations


Key Words: Land use regulation, Housing, Accessory dwelling units, Homeowners associations

DO ENDING SINGLE-FAMILY ZONING AND UPZONING EXPAND AFFORDABLE MIDDLE HOUSING? AN EARLY ANALYSIS OF THE RESIDENTIAL INFILL PROJECT IN PORTLAND, OREGON

Abstract ID: 417
Abstract within Pre-Organized Session 49

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Legalizing middle housing in single-family zones has emerged as a prevalent planning strategy adopted by various American cities to tackle housing affordability and equity issues. Recently, three states (Oregon, California, and Maine) and several cities have banned single-family zoning and legalized middle housing such as multiplexes, townhouses, and small apartment buildings in neighborhoods that were exclusively composed of single-family homes. Only a handful of studies have investigated the efficacy of upzoning single-family neighborhoods in increasing housing affordability and diversity, with mixed findings. An assessment of California’s statewide upzoning suggests that it will have a modest impact as only a small percentage of single-family lots are financially suitable for building additional dwelling units (Metcalf et al., 2021). Freemark’s (2019) study of upzoning in Chicago’s rail-transit station areas shows that upzoning increases property values but has no impact on housing construction. An early study of the Minneapolis 2040 Plan finds that the proposed city-wide upzoning is associated with an increase in property value (Kuhlmann, 2021). A study (Dong, 2021) of upzoning in Portland, Oregon in the early 2000s shows that upzoning leads to greater development probabilities, higher development densities, and more housing supply, but its impact on affordability remains unexplored. A recent cross-city study shows that relaxing land-use restrictions boosts higher-end housing supply but has no significant impact on the supply of lower-cost housing (Stacy et al., 2023).

This paper studies the Residential Infill Project (RIP) in Portland, Oregon, to contribute to the ongoing debate on the impacts of upzoning. Oregon’s House Bill 2001, passed in 2019, allows duplexes on each lot zoned for single-family homes in medium-sized cities and larger-size middle housing choices in single-family neighborhoods in large cities and all cities in the Portland Metro region. Portland’s RIP went into effect on August 1, 2021, allowing middle housing in single-family zones. Additional zoning code changes took effect with RIP (phase II) on June 30, 2022, giving homeowners and developers even more options to add units to a property or lot in single-family zones.

This study aims to address three research questions regarding the effects of Portland’s RIP: 1) what types of middle housing are being built after the ending of single-family zoning and implementation of RIP, 2) what are the locational (parcel and neighborhood) characteristics of the new middle housing, and 3) is the new middle housing affordable? This study utilizes multiple data sources and methods to address the three research questions. It utilizes a building permit data set to identify new homes that have been permitted or constructed. The data on zoning changes and land parcels are drawn from Portland Metro’s Regional Land-use Information System (RLIS). The socioeconomic data at the neighborhood level are from the American Community Survey (2016-2020) data set. I develop Multinomial logistic regression models to understand the locational choice of middle housing developments. To determine if the new middle housing developments are affordable, I compare their prices to those of new single-family homes that would have been constructed on the same lots if the upzoning had not taken place. I also evaluate the affordability of the new middle housing based on typical household income in the neighborhood.

There are few studies of the city-wide upzoning policies because their adoption has been recent. This study focuses on Portland, a leading city in the upzoning movement in the US, to develop a replicable method for evaluating the impacts of upzoning on housing development and affordability in cities that have eliminated single-family zoning. The study’s results will inform policymakers and the public in other cities and states that are considering similar laws to end single-family zoning.

Citations


Key Words: upzoning, middle housing, housing affordability, residential infill, Portland

IMPACTS OF CALIFORNIA’S STATE ADMINISTRATIVE REVIEW ON LOCAL ZONING AND PLANNING
Abstract ID: 418
Abstract within Pre-Organized Session 49

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Local governments craft and implement most land use regulation, but local power over land use is not absolute. States grant power to local governments to regulate land use. When local land use regulation obstructs regional or state housing goals, states may intervene in local power over land, imposing mandates or even displacing local power over land use. For example, local land use regulation that prohibits affordable housing production effectively excludes poor people. During the latter half of the twentieth century, several states chose to intervene in local exclusionary zoning through fair share housing production mandates. Some of those state actions came through the judiciary. But some of those actions came through state legislatures, in the form of planning requirements. California’s legislature was one of the first to act in 1969 by obligating localities to plan and zone for their fair share of regional housing need.

Despite California’s early adoption of a fair share planning framework, California cities have failed to produce housing. Some scholars attribute poor housing production outcomes to fair share planning mandates that did not require local governments dismantle local regulatory obstacles that can block the construction of new housing. In theory, the state planning law required localities to identify and remove regulatory constraints to housing production, but in practice, local governments failed to analyze or remove local regulatory constraints on production without consequence.

Recent legislation has since expanded state administrative oversight of local planning and zoning through the Department of Housing and Community Development (HCD). HCD has a new enforcement unit that works with local governments to bring them into compliance with state law. State law now empowers HCD’s planners to evaluate local planning action for compliance with state housing law. Where local planning fails, the state planners provide technical support. When non-compliance persists—HCD may then decertify a city’s housing element within its general plan and refer the matter to the State Attorney General for further action. This new enforcement unit does not wait for planning updates to review local action; the team regularly reviews and investigates stakeholder complaints about city planning practices.

This new era of increased state administrative oversight of local planning and zoning responds to many of the past critiques of California’s fair share planning framework, including critiques found in planning literature. This paper discusses those critiques, how this new administrative process responds to past critiques, and presents findings from case study research to explore the direct effects of increased state administrative oversight of local planning and zoning on San Francisco’s local zoning reform.

Citations

THE IMPACTS OF UPZONING AND INCLUSIONARY ZONING ON HOUSING OUTCOMES: A CROSS-CITY COMPARISON

Abstract ID: 419
Abstract within Pre-Organized Session 49

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While economic theory describes longer-term increases in housing supply and reductions in housing cost due to upzoning (Been et al. 2019), there are lively planning and policy debates around the possible short-term costs of rezoning to allow increased density (Davis 2021). This paper examines how upzoning and inclusionary zoning policies have impacted housing outcomes in six U.S. cities that have recently seen upzoning, with and without affordability requirements. Specifically, it asks: How has upzoning impacted (1) residential mobility patterns and (2) racial and economic segregation across cities in the U.S.? While housing affordability in relation to land use reforms has been the subject of recent research and debate (Stacy et al. 2023), there is little work examining other housing outcomes across different cities.

Neighborhood characteristics are important for multiple life outcomes, and research has examined the impacts of residential mobility on children in particular (Chetty et al. 2016). However, residential mobility is difficult to measure due to the challenges of obtaining location information over time (Greenlee 2019). I use consumer reference data, proprietary household-level datasets that provide location and demographic information, to examine indications of displacement of low-income households and households of color from areas of high opportunity. In addressing my first question, I measure residential mobility over time, including differential rates of residential mobility by race, income, and tenure. I also examine the types of neighborhoods residents move to, in terms of characteristics commonly associated with opportunity.

A significant body of research has demonstrated increased levels of racial segregation due to single-family zoning policies, but we know little about what upzoning means for segregation patterns across multiple cities. In addressing my second question I use census data and econometric methods to examine impacts on racial and economic segregation over time. I also pair my household-level analysis of residential mobility with an analysis of census data to understand how residential mobility relates to trends in racial and economic segregation.

This research intends to provide new evidence on how zoning has shaped different housing outcomes, and to inform current national debates around the potential impacts of upzoning and inclusionary zoning.

Citations


Key Words: Rezoning, Upzoning, Inclusionary zoning, Residential mobility, Segregation

Track 8 Roundtables

STATE APPROACHES TO INCREASING HOUSING SUPPLY THROUGH LAND USE REFORM: A RESEARCH AGENDA
Abstract ID: 370
Roundtable

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MAKAREWICZ, Carrie [University of Colorado Denver] carrie.makarewicz@ucdenver.edu, participant
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In the face of a national housing crisis, state legislatures across the country are adopting legislation aimed at increasing housing supply, improving affordability, and promoting fair and equitable housing. New legislation addresses regulatory barriers to a variety of housing types, required housing capacity/needs analysis, and local adoption of housing production or action strategies. Many states have long required housing elements or housing needs analysis as the basis of comprehensive plans. Further, some states mandated that municipal housing elements accommodate low income housing. Recent legislation from Oregon, Colorado and Washington are variations on California’s long-standing Regional Housing Needs Analysis (RHNA) process and Massachusetts 40B Housing Production Plans. Some states have passed legislation incrementally over the last 5 years like Oregon and Washington, while Colorado has proposed a sweeping package of legislation addressing zoning, and minimum parking. Washington relies on a voluntary, incentive-based approach to encourage cities to create housing action plans. Like the growth management and housing legislation of the 1970s, the recent legislation harkens issues of local control and states are using a mix of incentives and regulations to encourage or mandate local participation.

As scholars, these new approaches offer opportunities to compare and evaluate the effectiveness of state approaches to improve affordability through a range of indirect and direct approaches, from allowing for increases in housing supply, largely through land use controls and planning requirements, to requirements for inclusionary units, and direct investments in affordable housing through new funds for affordable housing. We bring together a panel of scholars from Oregon, Washington, Colorado, California, Massachusetts, and Maryland to discuss the programs within our respective states. Our panel includes scholars with expertise on the long-standing
approaches in California and Massachusetts in addition to scholars with expertise in Oregon, Washington, and Colorado. We will discuss a research agenda for evaluating outcomes and informing policy.

Citations


Key Words: land use, housing production, state governance, affordable housing

PLANNING FOR EXTREME HEAT ROUNDTABLE: A CONVERSATION ON URBAN HEAT ADAPTATION, GOVERNANCE, AND EQUITY

Abstract ID: 592

Roundtable

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LI, Xiaojiang [Temple University] lxiaojiang.gis@gmail.com, participant
MEEROW, Sara [Arizona State University] Sara.Meerow@asu.edu, participant
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LIM, Theodore [Virginia Tech] tclim@vt.edu, participant

Extreme heat causes more deaths than any other weather-related hazard in the US and is the leading cause of weather-related mortality worldwide; current estimates likely under-count the magnitude of heat-related morbidity and mortality. Temperatures in cities continue to rise due to climate change and the urban heat island effect (UHI), which can lead to cities being ten degrees Fahrenheit warmer than surrounding areas. Cities are getting hotter at the same time as urban populations are increasing, resulting in more people exposed to dangerous heat (Tuholske et al. 2021). Heat exposure and sensitivity are also unevenly distributed across cities, contributing to higher heat-related vulnerability among people with lower socioeconomic status and minority groups. Cities have begun responding to these challenges with policy and design interventions that aim to build resilience to heat risks through heat mitigation and management. Specific adaptation strategies include urban greening, shade, cool surfaces, early warning systems, cooling centers, and other policies intended to reduce temperatures, heat exposure, and vulnerability (Turner et al. 2022). However, even with the rise in recognition of the threat extreme heat poses, heat policy and planning remains underdeveloped and lacks a clear ‘owner’ or governance approach in comparison to other natural hazards (Keith et al. 2021). In an assessment of more than 3,500 climate adaptation resources in the U.S., only 4% focused on heat (Nordgren et al. 2016). Thus, the effectiveness and focus of heat adaptations in practice is not well understood, especially considering trade-offs between climate change mitigation and adaptation interventions, different ways to measure heat (land surface temperature, air temperature, thermal comfort), and other dimensions of urban adaptation. Roundtable topic areas that will be discussed include, but are not limited to:
The governance of urban heat adaptation or resilience
The geography of urban heat adaptation or resilience
Specific ways policymakers and individuals are adapting to heat in urban areas
The equity implications of heat adaptations
The effectiveness of different heat adaptation strategies

Citations

• Nordgren J, Stults M and Meerow S 2016 Supporting local climate change adaptation: where we are and where we need to go Environ. Sci. Policy 66 344–52

Key Words: Extreme Heat, Urban Heat Adaptation, Heat Governance, Heat Equity, Urban Resilience

ROUNDTABLE SESSION: THE TRANSFORMATION OF COMPREHENSIVE PLANNING IN THE 21ST CENTURY: EMERGING PARADIGM INTEGRATED AROUND SUSTAINABILITY, RESILIENCY AND EQUITY
Abstract ID: 1065
Roundtable

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ROUSE, David [Thomas Jefferson U] drouse@davidrousefaicp.com, participant
WOLF, Karen [UW] kswolf@uw.edu, participant

In this Roundtable, we discuss current trends in comprehensive planning, with a focus on a paradigm shift to more integrated systems-based approaches in the 21st century.

The roundtable will present recent research on local comprehensive plans, using matrix that included jurisdiction type, adoption date, organization & content, APA’s planning principles, the use of systems-based models, policies & implementation actions. 60 of those plans are described in detail. The plans are from across the US, including small towns, cities, suburban municipalities, & counties. This information has been incorporated into an APA Planning series book: The Comprehensive Plan (Routledge, 2022). The panelists have applied the systems-based paradigm in both practice and education and will share their work and observations. Among the key themes included are climate, equity, and health in planning.

The roundtable will discuss the evolution of comprehensive planning: looking first at previous models which focused on individual elements (e.g., land use, transportation, housing, utilities, etc.). The emerging systems-based approach emphasizes an integrated & holistic approach. The new unified paradigm is framed around 4 primary interconnected systems: (1) natural environment, (2) built environment, (3) economic, & (4) social. This paradigm builds on a foundation of sustainability, resiliency, & equity.

The discussion will continue on using this information in graduate level planning curricula and in professional practice. The roundtable is interactive with Q&A engagement with session participants.

Citations


Key Words: Comprehensive Planning, Sustainability, Equity and Environmental Justice, System-Approach, Policy

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**THE HOMEVOTER HYPOTHESIS AND HOMEOWNER PERCEPTIONS SURROUNDING UPZONING: EVIDENCE FROM MASSACHUSETTS**

Abstract ID: 63

Individual Paper

DAVIS, Jenna [Columbia University] jmd2218@columbia.edu, presenting author

The public participation process, together with regulatory barriers, have played a critical role in constraining the housing supply. Previous research has documented how land use institutions are structurally biased in favor of incumbent residents and homeowners, amplifying the oppositional politics of an advantaged slice of the population, who tend to oppose new housing development (Einstein, Glick & Palmer 2020; Manville & Monkkonen 2021). Fischel’s (2001) “homevoter hypothesis” is one of the leading theories to explain the rise of anti-growth sentiment among homeowners and the restrictive zoning barriers that exclusionary communities have erected across the United States. The premise of the homevoter hypothesis is that homeowners tend to favor policies that preserve or elevate residential property values by limiting pressure on local services and conserving existing amenities. As such, the homevoter hypothesis predicts that homeowners will tend to shift their preferences, opposing new development out of fears that development-induced negative externalities will adversely impact their largest asset—their home.

Upzonings, or zoning changes that allow for increases in development capacity, potentially complicate the expected logic of the homevoter hypothesis. Since upzonings increase the redevelopment potential of a piece of land, upzonings may lead to increases in property values, even if only in the short-term (Kuhlmann 2021). If homeowners believe that upzonings will lead to an increment in property values, it is possible that homeowners might favor upzonings, contrary to the expected prediction of the homevoter hypothesis.

This research tests the homevoter hypothesis through a case study of a wealthy suburban community in Massachusetts that proposed eliminating single-family zoning city-wide and enabling two-family homes to be built by-right throughout the city. Using in-depth, semi-structured interviews with approximately 25 homeowners, this research investigates the reasons that some homeowners supported the upzoning. Using qualitative content analysis, the research identifies the primary reasons and motivations that homeowners supported the proposed upzoning. I find evidence that questions the relatively accepted wisdom of the homevoter hypothesis, finding that...
a select subset of homeowners supported the upzoning due to financial motivations. However, results indicate that homeowner financial self-interest is one of several reasons that homeowners supported upzoning; others were willing to pass up the opportunity cost and supported the upzoning for more altruistic reasons. These findings are relevant to planners and policymakers that wish to curb exclusionary zoning and enact upzonings. Results from this analysis indicate that appealing to the financial self-interest of homeowners might be one of several frames that planners and policymakers could lean into in order to garner greater support for upzonings, in particular in affluent communities.

Citations


Key Words: zoning, housing, land use, upzoning

THE COMPLEXITY OF PROPERTY RIGHTS EMBEDDED IN THE RURAL-TO-URBAN RESETTLEMENT OF CHINA: A CASE OF HANGZHOU
Abstract ID: 131
Individual Paper

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Property rights regimes and property market governance significantly influence urban growth. Political philosophers have laid theoretical foundations for property rights and ownership, paying special attention to the limits and justification of property (Dodds, 2001). China’s dual land ownership structure creates distinctive land markets in rural and urban areas, and the issue of ambiguous property rights systems is theoretically regarded as a rural issue. In recent years, rural-to-urban resettlement has become a potent tool of the government in promoting urbanization and addressing the ambiguity issue. Yet, resettlement projects may deviate from the presupposed ideal path of achieving equitable property rights through property rights rearrangements. This research aims to unpack the complexity of property rights embedded in rural-to-urban resettlement based on a theoretical discussion about property rights systems and a empirical case of Hangzhou.

For a better understanding of how property rights systems change in China, it is therefore essential to follow Slaev’s (2020) inquiry of how complex property rights are managed simultaneously by market mechanisms and central planning. This research draws extensively from property rights literature and is grounded upon several theoretical underpinnings. First, property rights should be perceived as a bundle of rights (Demsetz, 1974) and the rights over a resource are dividable among different stakeholders (Alchian & Demsetz, 1973). Chinese rural land is such a resource whose rights are separatable and various parties jointly possess the resource. Second, the property rights complexity is a two-dimensional construct concerning ownership structure and institutional arrangements. The complexity involves two sets of contrasting concepts: private versus collective (public) and formal versus informal (Demsetz, 2002; Deng, 2020; M. Zhang & He, 2020). Third, the politics of property rights leads to the selective protection and enforcement of property rights regimes in China (M. Cai et al., 2020). On these grounds, this research intends to shed light on the theoretical justification for China’s current property rights system and unpack the complexity of property rights embedded in rural-to-urban resettlement.
This inquiry is essential to a deep understanding of how rural-to-urban resettlement as and planning tool to facilitates a (sub)optimal property rights arrangement in contemporary China by probing the following questions. How has rural-to-urban resettlement addressed the ambiguity issue, and how has it led to the complexity conundrum of property rights in urban China? How have the resettlement-induced property rights rearrangements impacted resettled villagers’ post-resettlement adaptation in the host cities? How do market and planning mechanisms interact amid rural-to-urban resettlement in reconfiguring property rights?

This paper uses the empirical case of Hangzhou to present the property rights complexity embedded in rural-to-urban resettlement. Hangzhou’s development through urban annexation led to many rural-to-urban resettlement projects. Based on documentary analysis, field observation, in-depth interviews, and questionnaire surveys, this research argues that the ambiguity issue cannot be fully addressed through rural-to-urban transition, and the concomitant complexity issue is inevitable in urban areas without targeted policy remedies. The findings identify some main obstacles to the ideal transition of property rights systems. First, the resettled villagers are excluded from market participation by inadequate compensation through planning mechanisms. Second, resettlement communities suffer from the remaining rurality that challenges the enforcement of formal institutions and the governance of communal resources in the urban system. Third, the collective-retained land is an innovative but compromised institution devised by the local government to achieve a fair property rights rearrangement through resettlement, but its effectiveness is weakened by the politics at the village level. These findings have important policy implications for achieving equitable property rights in the context of China’s heightened attention to sustainable urban-rural development.

Citations


Key Words: Rural-to-urban resettlement, the complexity of property rights, property rights systems, resettled villagers, China

THE REDEVELOPMENT OF FORMER U.S. MILITARY BASES IN SOUTH KOREA: EXAMINING THE PROCESS AND THE OUTCOMES

Abstract ID: 144
Individual Paper

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This study examines the disparity between the goals and the practical implementation of land use planning for former U.S. military bases in South Korea, focusing on the influence of political, financial, and socioeconomic factors. Specifically, by conducting a case study of three cities; Dongducheon, Uijeongbu, and Chuncheon, the study explores the process and outcomes of the new land use plans to redevelop the former U.S. military bases.
In 2002, the U.S. and the South Korean governments agreed to relocate and consolidate U.S. military units in South Korea to a few large installations. As a result of the Land Partnership Plan, 69 out of 80 U.S. military installations nationwide were closed, and their land ownership was transferred back to South Korea. The presence of U.S. Forces Korea (USFK) has been a double-edged sword for their surrounding civilian communities. In the 1950s through 1970s, USFK bases played a significant role in the development of the local and national economy. However, since the 1980s, conflicts between USFK and local communities have surfaced. The major conflict focuses on limited land use and local economic resources for military presence. As a result, the cities where U.S. bases were located are often referred to as ‘the cities sacrificed for national security.’

To the residents of neighboring U.S. bases, base closures have been considered an opportunity for re-shaping their city. With the national Special Act on Support for Areas Adjacent to Districts Granted to the United States Armed Forces in Korea enacted in 2006 that provided financial support to the cities, regional and local governments have developed new land use plans to redevelop former U.S. bases into recreational, commercial, industrial, or institutional spaces. Nonetheless, much of the expected redevelopment has not yet come to fruition, and some of the cities are currently in a phase of decline. For example, in Dongducheon, 80 percent of local businesses adjacent to the U.S. base closed after the base shut down, resulting in a population decline.

Based on the issues, this research addresses the following questions: Why and how were new land use plans developed for each former host city? What challenges occurred during the conversion process? What are the differences and similarities between each case? The three cities for the case study were selected based on their distinctive experiences and outcomes in the redevelopment process. The research consists of a literature review and interviews considering the multi-dimensional nature of land use planning. It focuses on what happened and what is happening by reviewing policy letters, proceedings, comprehensive plans, and technical reports. Thirty semi-structured interviews with public officials, local activists and experts, and residents explore and detail the how and why of the planning and implementation process. For the interviews, snowball sampling is mainly used, and it is expected to reveal the undisclosed factors and governance systems that affect conversions.

Though there is previous literature studied on redeveloping former military bases or land-use planning under the Base Realignment and Closure (BRAC) program of the U.S. federal government (Hill, 2000; Ashley & Touchton, 2016; Clanahan, 2021), U.S. base closures abroad have not been thoroughly explored. This study will add to the work of Kim (2018) and Iwama (2021), by focusing on three case studies in South Korea. Also, recent years have witnessed a general trend of decreasing numbers of U.S. military personnel deployed overseas, which could potentially result in the closure of additional bases in Japan, Europe, the Middle East, and North Africa. The finding of the study can contribute to future policies regarding the reduction of U.S. military presence in other countries.

Citations


Key Words: Military base redevelopment, Base closure, Urban revitalization, South Korea
EVALUATION OF THE IMPACT OF SMART DECLINE ON POPULATION DECLINE: A STUDY BASED ON THE YOUNGSTOWN 2010 CITYWIDE COMPREHENSIVE PLAN

Abstract ID: 151
Individual Paper
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In an effort to assist those who remain in a shrinking city, smart decline policies, such as demolition, downzoning, or building social capital, seek to lessen the loss of citizens, companies, tax revenue, and other services (Weaver et al., 2016). As smart decline aims to preserve a high standard of living in shrinking cities, it would encourage current residents to stay and potentially increase the city's appeal to potential new residents (Hummel, 2015). Nevertheless, few articles have dealt with the effect of smart decline on the rate of population decline. Therefore, the research question of this paper is how smart decline strategies address population decline after being implemented. In 2005, Youngstown, OH adopted the Youngstown 2010 Citywide Comprehensive Plan including smart decline strategies (The City of Youngstown, 2005). This paper will examine whether Youngstown, OH has experienced less population decline after implementing the strategies relative to other cities without smart decline policies.

Difference-in-difference and synthetic control methods will be used to compare population change in Youngstown, OH from 2010 to 2019 with change in other shrinking cities where smart decline has not been applied. Synthetic control approach offers a methodical strategy to choose comparison units in comparative case studies (Abadie et al., 2015). To determine if Youngstown’s comprehensive plan is effective to alleviate population decline, a mixture of other cities in Ohio will be utilized to create a synthetic control unit that has a similar population change pattern as Youngstown from 1990 to 2009. The population change from 2010 to 2019 in counterfactual cities without a smart decline policy will be compared to the population change in Youngstown. Population estimates data from the Census Bureau will be used.

One way to address population shrinkage is to adopt pro-growth policies. However, growth-oriented approaches could cause decision-makers to disregard the demands of individuals who stay in shrinking cities (Ryan, 2012, as cited in Weaver et al., 2016). If a smart decline approach is helpful to mitigate population decline, the approach could be considered as an alternative strategy in shrinking cities. It is expected not only that smart decline would enhance quality of life of people who stay in shrinking cities, but also that it would prevent further population decline in the long run. On the other hand, smart decline might not be significant to explain population change after 2010 in Youngstown. In this case, as Rhodes and Russo (2013) said that Youngstown and other shrinking cities will struggle to handle sustained population declines unless major state and federal investment is made, various strategies could be considered with smart decline to address population decline.

Citations

Key Words: Shrinking city, Smart decline, Difference-in-difference, Synthetic control, Youngstown, OH

MORE THAN SURFACE TEMPERATURE: MITIGATING THERMAL EXPOSURE IN HYPER-LOCAL LAND SYSTEM

Abstract ID: 157
Individual Paper

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Land cover plays a large role in determining the thermal conditions in cities, which is an increasingly urgent concern in cities around the world that must contend with increasingly extreme and inequitable heat impacts. Regional climate science has unequivocally established the connection between urban land features such as buildings, roads, and parking lots and hotter land surface temperature (LST) in cities than proximate undeveloped, vegetated land: the urban heat island phenomenon (UHI) (Voogt and Oke, 2003). These studies direct attention toward the role of density of vegetation and albedo in regulating LST by controlling evaporation and the amount of solar radiation reflected off a surface. However, LST is just one of several types of temperature and most relevant for representing the regional UHI and not hyper-local urban heat challenges. Mean radiant temperature (MRT), a composite indicator that includes multiple factors that contribute to thermal burden, has been used as a closer proxy to the human experience of heat (Vanos et al., 2010). Sub-neighborhood scale urban design and natural features control human thermal burden by determining exposure to incoming solar radiation and outgoing radiative heat from urban objects proximate to the body, in addition to controlling factors such as air flow. Urban climate is highly sensitive to hyper-local (10s square meters or less) variation in the built environment; LST and MRT are especially sensitive to the built environment and can vary between points just a few feet apart due to micro-variation in surface material and sun exposure (Middel et al., 2014). Yet, UHI is the dominant framing for urban heat problems and regional LST– and sometimes regional AT– maps are the most prevalent tools at the disposal of cities, if they have any data at all (Meerow and Keith, 2021). A major reason why LST maps are so prevalent is that spatial data are readily available and straightforward to process for entire regions. There is a potential mismatch between the type of information provided through conventional remote sensing-based data outputs and the type of information that cities need to make effective decisions (Keith et al., 2021). Therefore, an important question for cities when planning and implementing cooling interventions is the extent to which LST versus solar exposure are relevant and which aspects of urban land moderate each.

This study investigates the extent to which remote sensing derived estimates of LST are a proxy for multiple climate variables at hyper-local scales (<10s of meters) through the following questions: (1) How do temperature variables vary diurnally in comparison to one another? (2) Does LST predict temperature variables? (3) Which urban land features explain variation in temperature variables?. We compare remotely sensed estimates of LST (RS-LST) to field and simulated LST, MRT, and AT, in a neighborhood in Tucson, Arizona, USA. We find that LST, MRT, and AT follow different diurnal trends masked by RS-LST. We also find that three-dimensional urban design is a better predictor of MRT than two-dimensional land cover and albedo – a known determinant of RS-LST. Shade is a better predictor of both simulated LST and MRT than RS-LST. We conclude that RS-LST is not adequate for guiding heat mitigation at hyper-local scales in cities.

Citations
LEARNING FROM LAND USE REFORMS: THE CASE OF RAMAPO, NEW YORK

Abstract ID: 230
Individual Paper

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Many state and local governments are currently reforming zoning to increase housing production, especially of dense, small multifamily options (often known as missing middle housing). However, not all efforts to reform single-family zoning are new. This paper uses quantitative and qualitative data to assess the impact of zoning reform in the town of Ramapo, New York—a place that has continuously loosened zoning rules for almost four decades. The case shows that the introduction of multifamily zoning—even in built-out suburban neighborhoods—can spur the large-scale production of new housing units. By contrast, laws that allow only for accessory units may have more limited effects. The town’s experience also demonstrates the importance of infrastructural investment to serve new housing supply, especially when density is added in suburban areas. It also shows that, at least in an unusually pro-growth political environment, discretionary review and parking requirements do not automatically hinder housing production.

Citations


Key Words: zoning, land use, housing supply

URBAN GROWTH MACHINES WITH LATIN AMERICAN CHARACTERISTICS: AD HOC URBAN GROWTH MACHINES AND THE GOVERNANCE OF URBAN SPATIAL STRUCTURE IN GUADALAJARA, MEXICO

Abstract ID: 237
Individual Paper
Understanding the politics behind the trajectory of urban spatial structure is relevant because urban form has important implications for livelihoods and overall urban equity. While the location of economic agglomerations determines the type and the location of jobs available for urban dwellers, housing patterns influence the residential location of workers relative to their places of work. This paper looks at the politics behind such structuring. We analyze the case of Guadalajara Metropolitan Area (GMA), Mexico. Our study asks: what governs urban form in a region that, despite a clear intention to advance a polycentric urban form, still trends towards a monocentric urban spatial structure? We conducted sixteen semi-structured interviews with key informants that have lived experience in the governance of urban form in GMA and analyzed them through a memoing technique with the analytical lens of the public action framework. We found that it is the aggregation of the individual actions of rentiers that is shaping the trajectory of urban spatial structure in the GMA. Such rentiers engage in urban politics to advance their individual investment projects in a way that resembles an urban growth machine, but with Latin American characteristics.

Our findings allow us to propose the concept of ad hoc Urban Growth Machines (hereafter ad hoc UGMs), which we define as a logic of action through which rentiers assemble and mobilize a short-lived and fluid collation of urban actors to influence policy in ways that will support their investment projects. We argue that ad hoc UGMs have the following characteristics. First, ad hoc UGMs operate at the micro urban scale to advance the implementation of a project in a specific urban space. Second, ad hoc UGMs are short-lived in time, assembled around a specific urban project, and disarticulated after the completion of their mission. Third, rentiers can wear a diversity of hats, often occupying key offices in public administration with leverage to promote policy changes in support of their projects. Fourth, ad hoc UGMs advance a narrative for their projects around trendy urbanism, utilizing what local actors understand as international best urban planning practices for consensus building. Fifth, ad hoc UGMs lobby in favor of their projects both through official urban planning channels and through informal spaces and practices, often achieving relevant policy changes through the latter strategy. And sixth, ad hoc UGMs are focused on advancing a project in a very specific low-scale urban space and are dismissive of the neighborhood, metropolitan, or regional implications of their projects.

The contributions of our concept of ad hoc UGMs to urban planning scholarship and education are threefold. First, we contribute to the literature on urban political economy by proposing a conceptualization of urban growth machines with Latin American characteristics. Our conceptualization of ad hoc UGMs holds important explanatory power to better understand the governance of urban form in Latin American urban regions and can potentially be applied to other regions of the Global South. Second, we contribute to the literature on urban governance by adding a detailed study of urban form as an aspect of urban regions that is susceptible to be governed. In doing so, we propose the debate of whether the concept of ‘governance’ in urban studies should always be normatively charged with a positive aura or if the ways in which the governance of specific aspects of cities is configured can sometimes lead to negative urban outcomes. And third, our study of urban growth machines with Latin American characteristics adds nuances to urban planning education about the micro-processes in urban politics that, when aggregated, have an unintended influence over urban spatial structure.

Citations

THE COMPLEXITY OF STATE-LED HOUSING PLANNING: LESSONS FROM IMPLEMENTATION IN SOUTHERN CALIFORNIA

Abstract ID: 305
Individual Paper

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The lack of affordable and quality housing has long been a topic of concern in many economically vibrant regions in the United States. Many states have exercised their legal power to adopt planning statutes that require local jurisdictions (e.g., cities and counties) to address regional housing needs, especially (but not exclusively) for people of low and moderate income. The implementation of state-led land use planning and development regulation, however, remains subject to political controversy and persistent opposition at the local level (Fischel 1992; 2001; Infranca 2019; Ihlanfeldt 2004).

This study is motivated by California’s recent efforts to strengthen enforcement within its housing planning system through introducing additional legislative and administrative rules. California has engaged in more than five decades of top-down, state-led planning. The current housing planning system seeks to mitigate high housing costs and achieve multiple policy objectives such as improving intraregional jobs-housing balance, reducing excessive commuting and greenhouse gas emissions, and advancing socioeconomic equity. Since 2017, the State Legislature has enacted a set of additional rules seeking to strengthen the housing planning system through a complex array of standards, requirements, and procedures. Current state law establishes a Regional Housing Needs Assessment (RHNA) process for assessing and allocating numerical housing targets to local governments, which must then update the housing elements of their general plans and demonstrate adequate land use capacity and strategies for accommodating the housing targets. State law also provides enforcement mechanisms to ensure that local plans and policies conform to statutory requirements. The California Department of Housing and Community Development (HCD) now has enforcement capabilities on the state requirements, and it has issued detailed guidelines instructing local governments how to meet the statutory requirements. Local housing elements must be submitted to HCD for review and certification.

The implications of rule complexity for implementation are worth investigating in light of the impetus to compel local governments to meaningfully and adequately address housing needs through updating their housing elements. This study seeks to understand how complex rules influence the implementation of California’s housing planning system. Complexity in rule is examined through both historical and theoretical lenses. To understand how the planning rules are interpreted and implemented on the ground, I evaluate the decision letters issued by HCD to understand how HCD is fulfilling its enforcement responsibilities in light of the complex planning requirements. I also collect data through semi-structured interviews with key informants and observations of public events related to local housing element update. These analyses focus on two large coastal counties in Southern California (Los Angeles and Orange), where many jobs-rich, transit-rich communities have received the lion’s share of housing targets allocated to the region.

This study contributes to the existing debate on top-down planning and policy implementation by addressing the implications of complex rules for implementation performance. Specifically, complexity is conceptualized into four dimensions: rule density, technicality, indeterminacy, and institutional differentiation. Trade-offs involved in
implementing complex rules are discussed in the context of California’s top-down planning system, in which HCD takes strong leadership to enforce state planning requirements and monitor local planning processes. This study highlights the complexity features of the planning rules by analyzing how HCD interprets and applies state laws in scrutinizing and certifying local housing elements. The prescriptive, technical requirements may have in some ways given HCD more control over local planning practice; however, the complex rules are likely to increase administrative burdens on both HCD and local governments that drain agency resources and could undermine (or substantially delay) compliance. Data collected from interviews and observations of public events further highlight implementation challenges from the perspectives of front-line practitioners.

Citations


Key Words: Land use, Planning law, housing

SMART TRANSIT-ORIENTED NEIGHBORHOODS IN JAPAN: HOW PRIVATE CORPORATIONS DEVELOP NATIONAL FLAGSHIPS

Abstract ID: 312

Individual Paper

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Japan practices a unique planning institution influenced by but independent of its German and Anglo-American precedents. Previous theories indicate: as historical path dependence constrains, Japanese planning focuses on small-scale environmental improvement. In this regard, planning at the mesoscopic neighborhood scale is key to explaining how Japanese cities are created. This assumption induces interpretations of neighborhoods ranging from the late 19th-century samurai house conversion to contemporary station area redevelopment. Consistently, a unique reliance on private corporations has characterized these practices for over a century.

Today, private sector-led smart city initiatives rise quickly and frame a new practical concept: Smart Transit-Oriented Neighborhoods (S-TONs), defined as small-scale planning projects integrating information and communication technologies (ICTs) in areas centering transit stations. The concept is at the frontier of Japanese planning that enduringly assists land development around transit nodes and corridors, but few have attempted to understand its logic from a global perspective. This study fills this gap by structurally investigating path dependence, power relationships, and practical norms behind the S-TONs. In order to identify critical lessons for global counterparts, the investigation answers: 1. Why and how private corporations led smart city initiatives near transit nodes? 2. How public planning institutions frame the private sector-led practice?

The research includes a critical literature review and four comparative case studies. It first conducts the review in English and Japanese across four interdisciplinary themes 1. Japanese studies, 2. planning history, 3. Transit-Oriented Development (TOD), and 4. smart cities. Data comes from digital and paperback libraries and archives,
including the National Diet Library of Japan, university libraries, and archives of private corporations. Preliminary findings from the literature review facilitate four comparative case studies relying on field studies and expert conversations. From the city center to the fringe of greater Tokyo, the analysis comparatively investigates four initiatives: Toranomon under Mori Building, Toyosu under Shimizu Corporation, Kashiwanoha under Mitsui Fudosan, and Fujisawa under Panasonic. Findings from the review and case studies merge to conclude the analysis.

The findings conclude: The private corporation-led S-TONs are semi-public initiatives framed by a pragmatic planning approach. The path dependent intimacy between the private and public sectors pushes the state to choose small-scale strategies that minimize interventions in private property rights and utilize private capacities for public purposes in ideal scenarios. Compared with smart city initiatives focused on top-down citywide governance, the S-TONs also emphasize incorporating ICTs for sustainable development but provide detailed solutions for individual neighborhoods in cooperation with engineers and urban designers. The state engages in the S-TONs with policy guidance and expert committee meetings, significantly preserving the inclusivity from private profits.

Many optimistically outlook that the initiatives benefit neighborhood residents with physical and social innovations, but it is worth noting that the capacity comes from the steady increment of public-private neighborhood strategies over decades. Any attempt at international policy transference requires efforts to put on the synthesis between the various sectors and the compromise on profits from private corporations. Further, the private corporations in the four case studies demonstrated neither a unified model nor a similar familiarity with planning goals, revealing a need to comparatively evaluate and selectively align characteristics of the S-TONs under future policy frameworks. Upon this foundational research, future studies may focus on how the initiatives tackle technological sectors and how private corporations concern public purposes (or not).

Citations


Key Words: smart cities, neighborhood planning, Transit-Oriented Development, planning institution, Japan

**POLITICS OF BELONGING ON AGRICULTURAL LAND: PUERTO RICO’S LAND USE ZONING AFTER HURRICANE MARIA**

Abstract ID: 331
Individual Paper

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Zoning’s municipal regulatory powers have been used to determine what land uses belong in agricultural lands. Land use zoning can be a pre-disaster land management tool to protect agricultural land from development and economic pressures, and to support climate mitigation in countries prone to disasters.
Using disaster colonialism as a point of departure, I borrow from the ‘politics of belonging’ scholarship to argue that land use zoning documents can be studied as planning processes and tools for the material construction of what (who and how) belongs or not in a place, especially after a disaster.

Since 2017, Puerto Rico has been under disaster recovery due mainly to Hurricane Maria. Puerto Rico (PR) serves as a case study to examine how zoning has been used on agricultural land before and after a disaster, particularly through recent controversial changes proposed by five island-wide regulatory permit tools: 2010, 2015, 2019, 2020, and 2022 Joint Regulations (JRs)

In this paper, I ask: What rhetorical work do these five regulations employ for agricultural lands? How, if at all, is this rhetoric changing after disasters? What agricultural landscapes are (re)created in the “official” planning discourse due to the regulations’ definition of what (who and how) belongs, or not, in PR’s agricultural lands?

To answer these questions, I employ critical policy analytic methods to examine how these five municipal zoning policies contrive agricultural landscapes and to assess how they articulate politics of belonging through acceptable human-land relationships. I focus my analysis of the text in the JRs that pertains to one zoning district Agrícola Productivo (A-P or Productive Agriculture). The text regulates where land may be used for agriculture, and what activities are permitted on agricultural land. I employ critical policy analysis in two forms: policy archeology and policy genealogy. By combining the politics of belonging framework with policy archeology, I examine why some land uses ‘belong’ while others are excluded from land use zoning documents. Moreover, I trace the policy genealogy of JRs over time. Particularly, I will focus on changes in the zoning district A-P before and after 2017.

First, I draw my analysis on the documentary records with an initial descriptive ‘excavation’ of which land uses are permitted across all JRs in the A-P zoning district. In other words, in the first excavation I answer “what” belongs through a close reading of the text. A second excavation relied on semi-structured interviews with key subject-matter experts (SME) from PR who explained the meaning behind the text. The purposeful sample of SMEs include zoning policy actors and policy makers.

Following the politics of belonging framework, the rhetorical work of land use zoning documents could help unveil the masked forms of power contained in the policy that challenge the ‘right to remain’ or belong. A thematic analysis from interviews with SME shows how the rhetoric of official planning discourse uses the cover of disaster reconstruction and sustainable development to propose incompatible land uses that may foster land dispossession, exclusion, and ‘deep colonialism’ on agricultural lands.

This paper provides a critical perspective of how land use policies in PR use discourse to (re)create rural landscapes, particularly after disasters, as a deepening process of colonialism. Its contribution intends to discern internal contradictions of land use zoning, while contributing to scholarship around territorial politics of belonging in the Caribbean. The paper unveils sociological interpretations of how defining land uses excludes certain human-land relations, traditions, and people in PR.

Citations

MEASURING THE EXTENT OF ZONING FOR DIFFERENT HOUSING TYPES IN THE UNITED STATES

Abstract ID: 343
Individual Paper

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As the United States’ housing crisis deepens, scholars and housing advocates continue to implicate the exclusionary zoning practices of local jurisdictions. These practices include large lot requirements, floor area requirements, parking requirements, and prohibitions of multi-family housing, accessory units, and mobile homes (Bronin 2022). However, because zoning powers have been delegated by states to thousands of municipal and county governments, advocates of change lack a quantitative understanding of how widespread different exclusionary zoning practices are, and therefore of how to best target reform efforts. The National Zoning Atlas is a contemporary effort to comprehensively map the extent of various components of exclusionary zoning across the US (Bronin and Ilyankou 2021). Pending its completion, a sampling of places offers a prelude to the far greater understanding that will develop from the National Zoning Atlas, as well as an opportunity to compare preliminary Zoning Atlas results from the state of Connecticut to a national sample. We employed a random, stratified sampling approach to select ninety census-designated places from across the US, and then classified these places’ residential and mixed-residential zones into one of six categories based on the ‘highest’ type of housing allowed as-of-right (single-family detached, single-family attached, single-family with an accessory dwelling unit, mobile home, two-family, and 3+ family). This allowed us to describe how much residential land was allotted to different housing types across our sample places. We found that exclusive zoning for single-family detached housing is either absent or comprises under a quarter of residentially zoned land in over half of the sampled places, but also that there is a relative dearth of zoning for three or more units per lot. We also used linear regression analysis to explore relationships between the amount of residential land allotted to different housing types and local population, income, race, political, and homeownership characteristics. Aside from a significant negative correlation between homeownership and the amount of land zoned for three or more units per lot, we did not find significant relationships. To the extent that restrictions on housing type affect local demographics or vice versa, it is likely in interaction with land costs and other local peculiarities that are obscured at the national scale. We also caution that our findings reflect recent zoning reforms that have remade the landscape of local zoning in a number of states to be much more permissive.

Citations


Key Words: Zoning, Exclusion, Housing Types
The idea of retreat has increasingly become part of global consciousness in the face of climate change. Post-disaster retreat, both reactive and voluntary as well as collective managed relocation, has been part of the fabric of civilizations for millennia (Hino, et al., 2017). With the relative stability of the global climate system over the last 5,000 years, civilization has developed under an illusion of stability and predictability. As climate change has led to accelerating sea level rise (SLR) and intensifying tropical cyclone activity, assumptions of stationarity have given way to uncertainty and instability. A 2017 study by the Union of Concerned Scientists assessed chronic coastal flooding in 52 US cities and found that by 2045, many of the cities in their study, including Jacksonville and Miami, Florida, will experience as many as 100 flooding days a year (Spanger-Siegfried et al., 2017). SLR may displace as many as 13.1 million people in the United States by the end of the century (Hauer, 2017). In Florida, the coming threats of inundation along the coast, tidally influenced rivers, and bubbling up from underground are forcing Florida's communities, especially coastal communities, to consider the idea of retreat (Carey, 2020; Frank, 2020; Mach and Siders, 2021).

Often, retreat is undertaken as a reactive response to repeated hazard events such as storm-based flooding. Sea level rise poses a different kind of challenge, one that allows communities and planners to consider anticipatory interventions that set the stage for retreat from the coast. This paper explores the extent to which Florida’s comprehensive plans are including relocation or retreat strategies among their SLR adaptation measures as an anticipatory strategy rather than a reactive post-disaster loss response. With the passage of the Peril of Flood Act in 2015, Florida’s coastal municipalities are required to consider SLR impacts in their comprehensive plans, but the act did not specify how. Planners in the state are responding. Our analysis has shown that the number of plans considering sea level rise has gone from 22 in 2015 to nearly 90 by mid-2019 to more than 130 by the fall of 2022. At the same time, larger numbers are beginning signal the need to add retreat to the mix of potential strategies. Those even mentioning “retreat” have gone from three plans in 2015 (Butler, Deyle, and Mutnansky, 2016) to 17 plans by mid-2019 to nearly 30 by 2022. In this paper, we analyze the retreat language incorporated into these plans and explore the implications for both coastal planners and researchers.

We find that protection and accommodation strategies still dominate the SLR adaptation planning landscape, suggesting that coastal communities will continue to resist moving as long as they can. However, the focus on retreat strategies is growing. Most retreat policies are general and vague, listing retreat among an array of options rather than specifying locations or types of facilities that will be part of relocation efforts. Where specified, the focus has been on relocation of public facilities and infrastructure, largely ignoring relocation of private development and only placing minimal limits on continued development of private lands in coastal zones. This suggests the continuation of an incremental approach to SLR adaptation planning as observed in prior research (Butler, Deyle, and Mutnansky, 2016). While the moves are tentative, there are signs of more progressive policies and strategies emerging. Under the increasingly dire projections of SLR, a growing number of coastal plans are building the foundation for the longer-term consequences associated with SLR. This approach has many implications for coastal planning along low-lying coast zones globally, especially where coastal settlements are generally sites of significant economic value.

Citations


Key Words: sea level rise, climate change adaptation, anticipatory planning

TRANSFER OF DEVELOPMENT RIGHTS FOR MANAGED COASTAL RETREAT: CONCEPTUAL DESIGN AND PRACTICAL APPLICATIONS
Abstract ID: 381
Individual Paper

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In response to the increasing risk of sea level rise, the U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and many professional planning publications suggest the use of Transfer of Development Rights (TDR) programs as a promising tool for redirecting development away from high-risk coastal regions (National Oceanic and Atmospheric Administration, 2012). However, TDR programs are complicated programs which have multiple tailorable features that affect programs’ performance (Pruetz & Standridge, 2008). Moreover, most TDR programs are adopted for land preservation rather than coastal retreat purposes. In addition, in practice, many TDR programs are not particularly successful, resulting in only limited transactions and preservation (Linkous & Chapin, 2014). As a result, how to design an effective TDR program to meet the needs of managed retreat remains an important—yet daunting—question to researchers and practitioners alike.

In this paper, we develop two prototypes of TDR programs with features tailored to the needs of coastal retreat. We also conduct case studies of seven TDR programs aimed at coastal or waterfront retreat or with relevant program designs, using a mixture of quantitative and qualitative approaches. These cases include Miami-Dade County, Brevard County, Pine Island, and Monroe County, Florida; Oxnard and Tahoe Region, California; and Ocean City, Maryland. They are an exhaustive list of existing TDR programs implemented or proposed to be implemented for the purpose of coastal or waterfront retreat in the United States.

The primary data used in this study come from two sources. First is the collection of design features and performance data of the seven practical applications of TDR programs from empirical studies and the “Smart Preservation” database (https://smartpreservation.net/tdr-updates/) – a comprehensive database of TDR programs. Second, we conducted interviews with urban planners and related experts associated with these programs to provide contextual insights about the program design and update data on these programs’ performances. These interviews also reveal the planners’ perspectives on their program successes, challenges and necessary improvements.

We integrate qualitative with quantitative approaches to comparatively analyze these TDR programs. The quantitative approach includes a meta-analysis of existing empirical studies to statistically summarize the design features and performances of these programs. In addition, the qualitative approach involves thematic content analysis of semi-structured interviews. The marriage of these two approaches allows us to form a comprehensive and up-to-date picture of both the design features and performances of these programs, which we can then
compare against our conceptual design and Pruetz and Standridge (2008)'s classification, and discern which program features contribute to better performances of these programs. Overall, we aim to provide guidelines for coastal regions based on which they can develop their own TDR programs with the desirable features that increase the chance of a successful program.

Citations


Key Words: TDR program, Coastal retreat, Conceptual prototype, Practical applications

STREETCARS: AN ENGINE OF ECONOMIC DEVELOPMENT BUT NOT AFFORDABILITY

Abstract ID: 394
Individual Paper

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Streetcars have returned to many cities in the United States, and still more cities are contemplating launching their own streetcar operations. Yet most streetcars carry relatively few riders and show poor transportation performance, raising questions about their purpose. Studies based on interviews with developers, business leaders, local officials, transit planners, streetcar advocates, and other key respondents, as well as other documentary sources, find that streetcars are seen as economic development, image-making, and tourism promotion tools rather than primarily transportation investments (Ramos-Santiago, 2016). The primary objective of streetcar implementation has been development and urban revitalization of underused or declining urban cores. In most cities, the streetcar is seen as a development catalyst (Brown, 2015). However, investments in low-carbon infrastructure such as streetcars tend to converge with significant rises in housing prices and decreasing numbers of lower-income and minority residents (Rice, 2020).

Since its inception in 2013, the Salt Lake City's streetcar operation (the S-Line) has been instrumental in revitalizing the Sugar House District and the city of South Salt Lake’s most northern sections, helping to bring to the area more than 2000 new housing units (with another 1000 units either in planning or already under construction), close to 300,000 square feet of new retail space and over 550,000 square feet of new office space. Since its launch, the area has benefited from nearly USD 2 billion of economic growth.

In order to assess the extent of new development within a 0.25-mile buffer around the streetcar (the S-Line) tracks, we used the tax assessor's data to assess land use changes in the corridor and estimated changes in number of acres, total building floor area, and property values for each land use (single family, multifamily, commercial, and industrial). We also estimated the value of new development that took place since the opening of the S-Line in 2013. In addition, we conducted the total of 7 interviews with developers who have built large multifamily projects within the buffer and city planners from the two cities that the S-Line runs through (Salt Lake City and South Salt Lake). We have also assessed current rent levels within the corridor using on-line resources and estimated the number of deed-restricted affordable housing units built since 2013.
Since 2013, a large number of properties have been redeveloped and the floor area of multifamily projects increased almost 4.5 times while the real value (inflation adjusted) grew 12-fold. However, even though the S-Line has spurred growth in residential development, very few of the new 2,000 units are affordable to households earning less than 80% of the Area Median Income (AMI). Of the 20 new multifamily rental projects, only one offers 35 of its units to households with an income at or below 50% of AMI. As neither Salt Lake City nor South Salt Lake has an inclusionary housing policy that requires provision of affordable units, the developer voluntarily set aside 20% of the units as deed restricted affordable housing financing them with the Low Income Housing Tax Credits (LIHTC). None of the market rate units located in the 20 new apartment buildings are affordable to median or low-income families.

Incentivizing provision of affordable housing close to transit is doubly important as streetcars and other forms of low-carbon transportation investments frequently lead to rises in housing prices and decreases in lower-income and non-white residents who often rely on transit for their daily transportation needs and are more avid users of the mode. Building luxury apartments next to transit is not only inequitable but also brings transit ridership down and diminishes its purpose and impact - both environmental and economic.

Citations


Key Words: Streetcars, Affordable Housing, economic development

INFORMALITY AS A TOOL IN A POLITICAL DISPUTE OVER LAND SHAPED BY MILICIAS' ENCLAVES
Abstract ID: 403
Individual Paper

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This work analyzes how a municipality[1] in the metropolitan periphery of Rio de Janeiro uses “informality” as a tool in a political dispute over a federal land. The land is part of an environmentally protected area, which has been occupied illegally over the years. This has led to a dispute between environmental movements, which advocate for its recovery and preservation, and the city, which seeks to attract private investment through large-scale urban projects. This case study aims to contribute to the international debate around informality, not by offering new concepts or engaging in the debate on the proper use of the term, but by focusing on the strategic use of informality as a political instrument in a contested territory and its consequences.

The city has constantly used "informal occupation" to characterize the area’s urbanization. In their discourse, ‘informality’ refers to precarious settlements produced by the urban poor and out of control of the municipal government. However, this "informal occupation" is actually carried out by milícias. Milícia is the Brazilian term for organized criminal groups made up of a mix of active and off-duty state security agents, elected officials, and civilians. Their activities include monopolizing and charging for essential services provision (i.e., water and
electricity), controlling critical assets (i.e., land), involvement with illicit markets (i.e., drug trafficking), and extortion of poor communities through protection rackets. In the past twenty years, they have also become involved in city-making, which includes (among other activities) land seizures and the subsequent divisions into plots for sale, forming illegal subdivisions. Due to its morphology—with few entrances and enclosed by several barriers—I refer to them as ‘enclaves.’ Milícias started to construct and manage these enclaves in the study area in 1995 and nowadays they constitute the main mode of urbanization there.

Although the presence of milícias’ enclaves in the protected area is widely known, the city administration has never acknowledged the criminal organization’s role in its public statements. Instead, the administration labels the area as "informal," thereby targeting other actors. This paper demonstrates how this omission can benefit milícias, allowing them to expand their territories without government interference. Furthermore, this study reveals that the term "informal" is used as a justification for municipal government modifications in urban and environmental legislations and zoning codes, which serve their own interests, indirectly enabling the milícias' enclaves to consolidate and gain legal recognition. This approach raises pressing concerns regarding the safety of local communities and the area's environmental preservation.

To achieve its objectives, the paper conducts an in-depth analysis of the city’s discourse since the 2000s, when the current administration first took power. The research draws on ethnographic data collected between 2021 and 2022, including field notes from public hearings, interviews with public officials and environmental activists, as well as archival material from social media, Brazilian newspapers, and municipal documents.

[1] All location and people’s names were omitted to protect the identity of my interlocutors.

Citations


Key Words: Informality, Brazilian Milícias, Peripheries, Global South, Land Use and Development

EVALUATION OF THE IMPACT OF ZONING POLICIES BY URBAN PLANNER: A CASE STUDY OF RAIL TRANSIT STATION AREAS.

Abstract ID: 434
Individual Paper

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Pre-evaluation of planning provides recommendations for modifying and adjusting the content of planning through evaluating planning texts, which has significant implications for enhancing plan quality and sustainable development (Neuman, 1998). Pre-evaluation of planning is mainly carried out at the city and regional scale currently. The evaluation objects are the master plans or special plans at the city level. There are few pre-evaluation for planning at the micro-scale. Carrying out policy (text) evaluation work for key locations at the micro-scale is beneficial to summarize planning implementation experience and avoid problems caused by cumulative micro-issues. Based on the work of Berke et al. (2015), we are proposing a pre-evaluation work framework for the planning quality of zoning amendments based on rail transit station areas. However, there has been an unresolved issue regarding policy weights in the framework. An area is always influenced by a bunch of zoning policies, and the impact weight of each zoning policy on the development goals of this area is not equal when evaluating the comprehensive impacts of policies on the station area. In this paper, we introduce a method we developed to quantitatively measure the impact of each zoning policy on the rail transit station area to facilitate the calculation and comparison of the comprehensive scores of planning quality across station areas.

After reviewing previous literatures, four development goals suitable for suburban rail transit station areas are identified: improving the vitality of the main function (residential, industrial, or commercial) of rail transit station areas, increasing rail transit passenger flow, increasing the carrying capacity of vehicle traffic, and improving the quality of walkable environment. Taking the text, explanatory notes, and maps of the zoning amendments of a suburban area in Changsha, Hunan Province as the research object, 36 different types of spatial policies surrounding three different types of rail transit stations within the scope of the zoning amendments are extracted according to the “GIPP (goal-index-parameter-policy)” policy screening system we developed. A semi-structured questionnaire interview on the impact of zoning policies was conducted with 38 urban planners who graduated from the fields of architecture, urban and rural planning, and landscape architecture from four large planning and design consulting firms in the city. The research results shows that 11.1% of policies (24 out of 216) had a high level of confidence score (greater than 1 or less than -1), 33.8% of policies (73 out of 216) had a moderate level of confidence score (less than -0.5 and greater than -1, or less than 1 and greater than 0.5), and 55.1% of policies (119 out of 216) had a low level of confidence score. Urban planners had the highest level of confidence in improving the vitality of the main function of rail transit station areas and the lowest level of confidence in improving the quality of walkable environment. The method we proposed for determining the size of the impact of zoning amendments policies is a cheap and easily accessible way of generating impact weightings of zoning policies for developing countries with a great lack of empirical analysis.

Citations


Key Words: impact weight, expert opinion

PLACE ATTACHMENT AND URBANIZATION IN MOSHI, TANZANIA

Abstract ID: 482
Individual Paper

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In sub-Saharan Africa, rapid peri-urban development, often informal and unplanned, and lacking in basic services and infrastructure, infringes on rural communities. This is potentially contentious because a) it threatens rural ways of life that are culturally entrenched and passed down through generations; b) rural communities are ethnically more homogenous and tend to have stronger economic and cultural attachments to place than their urban counterparts (Wasserman, 1982); and c) many African countries, including Tanzania, have dual systems of customary land tenure in rural areas and by-right land tenure in cities (Nuhu, 2019), so urban expansion is accompanied by changes to individual and public property rights.

Therefore, in rural areas on the peri-urban fringe of rapidly expanding African cities, urbanization can be interpreted and conceived as an unwelcome change that threatens traditional ways of life and personal and community cultural identity. This suggests that place based cultural identity has a role to play in shaping perceptions toward urban growth management policies (Devine-Wright, 2009). Nevertheless, despite the deep historical connection between ethnic identities and specific geographies, the role of place attachment in responses to threats or risks posed by urbanization has been understudied, particularly in sub-Saharan Africa (Dlamini and Tesfamichael, 2021). This is unfortunate, as African cities present certain unique characteristics when it comes to understanding the role of place attachment. Rapidly urbanization in peripheral regions of even smaller and medium sized cities are encroaching on rural areas with customary land tenure arrangements and generally ethnically homogenous populations, who develop a sense of community and belonging organized around land (Roos, 2008), often associated as “home” even by those who migrate away.

In this paper, we examine perceptions of urbanization in peri-urban communities of Moshi, Tanzania, a region that is rapidly urbanizing and historically associated and identified with the Chagga people. We collected data from 13 focus group discussions, two group interviews with local leaders, and five key informant interviews. We stratified participants by age, ethnicity (Chagga and non-Chagga), and geography (along a transect from more rural to more urban) to better capture the dynamics of place attachment. Key informant interviews were conducted with district political chairpersons and government officials. We find that place attachment informs perceptions of urbanization and is often articulated in how participants conceptualize and define what urban means, and informs personal behavior, ideology and decision making — a reluctance to sell land, association of the city as a place of poverty, concern about outsiders, etc. We note that these conceptualizations are often in marked contrast to how urban areas are institutionally defined and politically leveraged. Furthermore, our analysis indicates that there are both affective and functional aspects of place attachment exist for the Chagga. Both personal and communal cultural identity mix with traditional economic concerns (taxes, etc.) and practical implications (farming, etc.) The results also suggest that place attachment is declining among younger people. This study contributes to broader scholarship on place attachment, urbanization, and the politics of land use policies in peri-urban areas of African cities by arguing place attachment plays an important role in shaping private land management practices and urban growth management policies.

Citations

THE IMPACTS OF INSTITUTIONAL RULES ON LAND DEVELOPMENT IN HIGH-SPEED RAIL NEW TOWNS IN CHINA

Abstract ID: 497
Individual Paper

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China has built the most extensive high-speed rail (HSR) network in the world over the past decade. In the meantime, many HSR new towns have been launched around the newly constructed HSR stations, aiming to leverage the accessibility benefits of HSR to facilitate economic growth and urbanization. The land development pattern in HSR new towns and its determinants have received wide attention from researchers. Existing studies mostly focus on the impact of non-institutional factors, such as transportation and socioeconomic indicators, on the new town development, while the role of institutional factors is rarely examined. Whether and to what extent do the institutional factors affect land development in HSR new towns in China? What is the mechanism? This study aims to answer these questions by assessing the impact of typical institutionalized rules on land development in HSR new towns in China.

Institutionalized rules, such as policies, programs, regulations, are key reflections of formal organizations. In this study, we draw upon the literature on real estate and land markets, transportation planning, new town development, and institutionalized organizations to develop a conceptual framework for understanding how non-institutional factors (e.g., transport characteristics, physical environment of HSR stations, social-economic attributes, etc.) and institutional rules (e.g., policies, programs, regulations, etc.) shape the land development of HSR new towns in China.

Different from existing studies that mostly rely on city-level or county-level data, we construct a spatially detailed parcel-level dataset of 810 HSR new towns in China from 2006 to 2020. Based on the data, we compute seven indexes, including accumulated area of land developed, accumulated number of parcels developed, accumulated average development radius from HSR stations, accumulated average development intensity, accumulated area of land for development converted from agricultural land, accumulated overall floorage, and accumulated land leasing revenue, to quantify the land development patterns in HSR new towns and track their temporal evolutions with time-series analysis. Besides, we choose three institutional factors as explanatory variables from the official websites of governments at different levels, including city-level regulations on land use, city-level development goals of HSR new towns, and whether the HSR new town is located in state-level new areas (e.g., high-tech zones & economic development zones). Then, we calibrate the two-way fixed effect model to assess the impact of institutional factors on land development and investigate the heterogeneities of such effects.

We found that: 1) on average, city-level regulation on land use has facilitated land development in HSR new towns. Land development of HSR new town as measured by the 7 indictors in cities with such regulations are 3% to 9% higher than that in their counterparts, indicating that the “legitimacy effect” overweighed the “constraint effect” of the regulation; 2) a higher planning goal for HSR new town is positively associated with the actual land development in reality. For instance, if “HSR new town” is explicitly mentioned in the annual report of the local government, the accumulated area of land developed would increase by 7%, all else being equal; 3) HSR new towns located in state-level new areas tend to have higher level of land development compared to other HSR new towns. We also observe significant heterogeneities in these effects by regions, city size, and planning goals and regulations.

Our modelling results reveal that institutional factors play an indispensable role in the development of HSR new towns. Furthermore, we complement the research findings with qualitative analysis using data collected from field trips and interviews with stakeholders. We discuss the planning of HSR new towns in China as well as the...
mechanism through which institutional factors could affect the performance of HSR new towns.

Citations


Key Words: high-speed-rail new town, institutional factors, land use development, China

RETAIL ON THE GROUND AND ON THE BOOKS: ASSESSING THE CORRESPONDENCE BETWEEN RETAIL ACTIVITY AND DESIGNATED LAND USES

Abstract ID: 504
Individual Paper

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The past decade has ushered in a resurgence of cities. While the pandemic somewhat attenuated this trend, the demand for living near urban amenities and culture has persisted. Yet, even before the onset of the pandemic, a curious pattern of commercial vacancies accompanied this influx of investment into cities. Commercial vacancies, especially those for retail stores, have been documented in the popular media and through circumstantial anecdotes. There’s a sense that vacancy rates are as high as those not seen since the 1970s in cities, but there is little to no empirical evidence to quantify them.

This paper has two goals. First, we document the pattern of retail vacancies for cities across the U.S. over the past three decades. Second, we attempt to shed light on whether institutional context, specifically local zoning, has enabled the proliferation of retail vacancies. We correspond land uses with retail leases over time and across space to understand how well the local land use regime reflects actual retail dynamics on the ground. Does zoning reflect de facto retail activity, anticipate future trends, and ultimately align the physical infrastructure and space with actual market dynamics? Or, does zoning serve as an impediment to market adjustments in retail activity?

First, we compile a multi-faceted micro scale dataset to document the extent of commercial vacancies over time and across space in eight U.S. cities. We focus on retail services broadly, defined as customer-facing storefront commercial enterprises that rely more heavily on foot traffic and in-person patronage. We use our data to document the landscape and trajectories of commercial vacancies. Have commercial vacancies indeed increased more in recent years? Are vacancies increasingly more prevalent among certain types of commercial uses? Are vacancies more prevalent in certain kinds of neighborhoods?

Second, we focus on one city, New York, to assess how well retail activity is aligned with designated land uses. To do this, we create a parcel-level panel of structural features and land use designations over two decades and link it with information on retail leases. We then conduct regression and event study analyses to determine whether land use leads or lags market retail activity, and whether this relationship varies across different areas of the city. The data is rich enough for us to observe variations in terms of retail types and neighborhood characteristics.
Preliminary analyses for New York City indicate that rents are indeed higher and leases longer in the “hotter” retail markets in Manhattan, and bigger retail spaces are found in the least dense borough, Staten Island. Finally, aggregate trends paint a picture of retail occupancy that is consistent with the broader understanding of how the sector has evolved over the past few decades. The data also suggest increasing vacancy rates. Over time, especially since the mid-2000s or early 2010s, the number of new retail leases has plateaued, and rents have declined and more recently flattened. In addition, total retail space leased has plateaued or declined, and the time that empty spaces spend on the market has gone up.

Findings from our research can shed light on the broader interaction between regulation and markets and specifically inform land use planning around retail and mixed uses. If the utility of certain commercial uses is changing over time, then zoning and comprehensive planning should change the allocation of space to commercial uses, the spacing requirements, the design requirements for first floor spaces, or other land use regulations accordingly. As cities emerge from the pandemic and adjust to new work-live patterns, planning for the volume and spatial distribution of retail will remain an important task for urban planners and managers.

Citations


Key Words: Retail, Land Use Regulation

GOVERNING CLIMATE RESILIENCE PLANNING AND POLICY: SYSTEMS, AGENTS, AND INSTITUTIONS IN SHANGHAI

Abstract ID: 518

Individual Paper

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Coastal megacities around the world are increasingly facing the devastating impacts of extreme weather events, which have become the 'new normal' in the context of global climate change and particularly affect the global south (UN-HABITAT, 2011). Over the past few decades, the focus of efforts to address these issues has shifted from sustainability and climate change action to climate resilience development (IPCC, 2022). Climate resilience serves as a nexus between greenhouse gas mitigation and adaptation measures to facilitate sustainable development and garnering widespread attention in both academic research and practical applications. However, planning and policy for climate resilience at the local level could become ineffective or entirely absent due to a trade-off of other high-priority goals (Berrang-Ford et al., 2011). This study examines planning and policy related to climate resilience in the coastal megacity of Shanghai, China, where heat and flood are becoming more severe. Therefore, we aim to address the following research questions: 1) Where do climate shocks and pressures manifest in urban systems? 2) Who is involved in coping with climate resilience planning and policy? 3) In what way are the urban resilience elements organized in the context of climate resilience? The distinction of three generalizable elements between systems, agents, and institutions (Tyler & Moench, 2012) is employed as a basis for the analytical framework for this study. These elements also collaborate with one another to establish a framework and assess
urban climate resilience. In this research, we employ a critical case study approach to investigate how municipal departments and decision-makers manage climate-resilience planning and policy. Firstly, systematic data collection and analysis methods are employed to evaluate the state of planning and policy, using web-based documents on mitigation and adaptation as a proxy for identifying and characterizing the occurrence of climate resilience. Secondly, by using process tracing methods, theme one ‘climate shocks and pressures’ discusses the vulnerability of systems, particularly infrastructure, in face of climate change. Finally, the theme two ‘coping with climate risks’ finds the driving power and barriers of agents and institutions across levels of government. Through a systemic analysis of Shanghai’s climate resilience policy and planning, our findings reveal that the primary climate stressors in Shanghai are extreme precipitation events and urban heat. Infrastructure, transportation, and energy systems are identified as the most vulnerable to climate shocks from the element of ‘system’. In terms of ‘agent’ and ‘agency’ element, urban planning departments are chronically disadvantaged in climate resilience governance, while water resources management and emergency management departments hold an increasingly dominant position. In general, our findings reveal that climate resilience governance in Shanghai is primarily characterized by a top-down, government-led approach. Although the urban planning department and the Development and Reform Commission advocate climate resilience goals, a lack of urgency in implementing these goals into the infrastructure, transportation, and energy sectors directly contributes to the lower priority of climate resilience actions. While this research is limited to the local case study of Shanghai, many coastal megacities are experiencing similar climate change-induced shocks and pressures, yet continue to maintain a lack of effective governance. We hope this research can be useful to other coastal megacities to reconsider the significance of climate governance or collaborative process.

Citations


Key Words: climate resilience, governance, urban planning, policy, local government

INDIGENOUS PLANNING AND THE UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES: CONSIDERATIONS FOR IMPLEMENTING SHARED-DECISION MAKING

Abstract ID: 607
Individual Paper

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Indigenous planning in settler states is part of the struggle to assert and maintain the rights and sovereignty of Indigenous peoples worldwide. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) - which details the rights of Indigenous peoples and the minimum standards for the recognition and protection of these rights - was adopted in 2007. Canada officially endorsed UNDRIP in 2017 and the difficult and necessary work of implementation has only begun. Implementation must be Indigenous-led, and will require transformative
changes to processes and practices deeply entrenched within colonial governments, systems and institutions, including planning. With this in mind, our paper asks: how does Indigenous planning theory and practice support and advance meaningful implementation of the United Nations Declaration on the Rights of Indigenous Peoples in Canada? Drawing on Indigenous planning theory, public documents, and practitioner insights, we argue Indigenous planning – centred on a decolonizing agenda, political strategy and place-based approaches - offers practitioners tasked with the implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in British Columbia (BC), Canada a clear path for developing shared decision making frameworks.

In June 2019, the Province of British Columbia passed novel legislation called the Declaration on the Rights of Indigenous Peoples Act (DRIPA), which aims to create a framework for shared power and authority between the BC government and Indigenous governments. As new approaches for how to implement DRIPA continue to unfold for BC provincial staff and planners, the need to establish new collaborative processes becomes ever more urgent. Indigenous planning responds to this need through processes, beliefs, and values defined by Indigenous worldviews and Indigenous planning experts. Indigenous planning is not limited to spatial planning and resource management; it links specific Indigenous communities to their ancestral places, histories and resources. This analysis is applicable to colonial governments considering how to implement UNDRIP, and illuminates the ways in which Indigenous planning can orient government staff and planners towards uplifting Indigenous planning practices (i.e. place-based approaches). We call for planners to co-develop shared futures without bypassing Indigenous sovereignty.

Citations


Key Words: Indigenous planning, Indigenous sovereignty, United Nations Declaration on the Rights of Indigenous Peoples, British Columbia, shared-decision making

TACKLING OR REINFORCING SPATIAL INEQUALITIES? OUTCOMES OF A STATE-WIDE DENSITY BONUS FOR AFFORDABLE HOUSING INCLUSION IN SYDNEY, AUSTRALIA

Abstract ID: 631

Individual Paper

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Faced with strong development demand and fiscal austerity, many cities internationally are using value uplift and recapture mechanisms to fund important public goods, including affordable housing (Biggar and Friendly 2020; Kim 2020). In some jurisdictions, such as the State of California, the use of density bonusing to support inclusionary housing goals has been longstanding. But voluntary, incentive-based inclusionary housing schemes are also growing in prevalence across the US (Thaden and Wang 2017). While the externalities and efficacy of density bonusing as a strategy to deliver public goods is widely debated (Biggar and Friendly 2020), only a small body of research has investigated the geographic patterns of where density bonuses for affordable housing inclusion are taken up (Ryan and Enderle 2012), and not at a metropolitan region scale. This is surprising, given the role the location of affordable housing plays in helping to address, or in exacerbating, urban spatial inequalities.

In this paper, we address that gap with reference to the Australian state of New South Wales, which is home to the Sydney metropolitan region. With strong resistance from the property industry to mandatory inclusionary zoning, successive governments have favoured incentive-based approaches that use value uplift and recapture mechanisms to encourage rather than require private affordable housing provision. In 2009, the state government used its planning powers to introduce a codified, state-wide density bonus for residential developments including at least 20 per cent affordable rental housing. Developers can elect to use the density bonus on any site zoned for general, medium or high density residential across the state, provided minimum lot size, transport accessibility and other codified development standards are met. As such, the policy seeks to overcome perceived local planning barriers to take up, particularly in established communities where additional density is particularly valuable but opposition to growth is most acute.

Using this case, we ask whether and how the spatial pattern of elective utilisation of the NSW density bonus policy over a 12-year period correlates with (1) local housing market characteristics; (2) the socio-economic profile of communities; and (3) local government planning approval rates and timeframes. These factors are examined using a primary, development-application-level dataset, in conjunction with secondary data on local area characteristics, which we examine through a combination of spatial and non-spatial statistical analysis. We also draw on the findings of a small number of interviews with affordable housing developers and development experts to interpret our findings.

We find evidence that the density bonus is fostering new development models amongst some small-scale private housing developers, and is being utilised by non-profit housing providers, resulting in a modest supply of new affordable rental housing. But take-up is concentrated in suburbs that have lower median rents and house prices; higher concentrations of socio-economically disadvantaged residents; less community opposition to density; and, lower competition for development sites. As these areas undergo incremental renewal processes, the policy does appear to be supporting small inclusions of moderately priced affordable rental housing. However, on a metropolitan region scale, this codified, state-wide policy is failing to foster new affordable rental housing supply in the higher value, job-rich locations where it is critically needed, reinforcing, rather than countering, Sydney’s spatial inequalities. The finding speaks to the risks of relying on market actors and regulatory incentives alone to deliver social outcomes. In Sydney, it highlights a need for more nuanced policies and tailored approaches that recognise the unique market attributes and development contexts of areas of acute housing need.

Citations

GOVERNING URBAN LAND COVER AS A COMMON POOL RESOURCE

Abstract ID: 663
Individual Paper

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Urban land cover differs from urban land use, but it is hardly ever treated by planners or policymakers as an urban resource, thus contributing to haphazard modes of environmental planning and policy. Consequently, urban areas encounter deteriorating land cover from conversion of natural to impervious surfaces, generating urban heat island effects and urban stormwater problems. Rapid urbanization and climate change worsen the problems. Following Elinor Ostrom and colleagues’ work, we define urban land cover as natural and artificial earth surface features, such as urban pavements, lakes, lawns, and forests, that should be considered a common pool resource (CPR) based on the difficulty of excluding people from using it and highly subtractability. According to Ostrom’s institutional design principles, cities can achieve effective urban land cover management by establishing specifically designed institutional arrangements. Based on her principles, these institutions help reduce environmental CPR deterioration. We chose the 30 most populous US cities that have general sustainability plans to see how cities govern their land cover and manage the environmental issues associated with it. We found that the cities treat land cover problems as a set of “issues” amid many other issues within complicated systems, overlapping political jurisdictions at multiple levels (county, city, regional, and state), across many agencies, and with multiple stakeholder involvements. The finding conforms to expectations raised by theories of “issue networks” or “policy arenas.” Cities falter in management efforts when they treat the land cover as merely one more in the jumble of environmental policy problems to be fought alongside tax, economic development, housing, and so forth. Lack of sanction and shortage of monitoring are also found in our study. Based on our findings, we propose that municipalities should govern their land cover as a CPR by providing semi-autonomous governance that could include special districts, planning boards, and public-benefit authorities nested within broader government administration.

Citations

WHAT DOES (RE)ZONING HAVE TO DO WITH TRANSIT-ORIENTED DEVELOPMENT? THE CASE OF MONTREAL, CANADA
Abstract ID: 670
Individual Paper
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Transit Oriented Development (TOD) is an influential planning approach that numerous cities investing in light-rail transit (LRT) have been adopting. TOD aims to integrate public-transport investments with land-use practices to create more diversified, dense, and sustainable neighborhoods (Jacobson and Forsyth 2008). TOD depends on suitable land-use regulations to enable the application of its principles (Millard-Ball 2021), especially in suburban areas where Transit Adjacent Developments (TADs) often arise instead (Dong 2016, Staricco and Vitale Brovarone 2020). To assess these possibilities and constraints, we suggest bringing attention to the processes through which municipalities are making changes (or not) to zoning bylaws to accommodate TOD around new LRT stations.

This paper analyzes the transport land-use connection in Montréal, Québec, where TOD goals have moved to the forefront of regional urban-planning strategies. In line with the development of a new LRT system—a CAD $7 billion investment—policymakers are aiming to redevelop neighborhoods surrounding LRT stations in accordance with TOD goals and orient 60% of household growth around mass transit. Given the magnitude of these plans, we draw from policy analysis methodology (Schmitt 2012) to examine bylaw changes across 25 LRT station areas between 2016 and 2022 (the planning and construction phases) and to evaluate the extent to which these changes correspond to regional TOD plans pertaining to density, land use, and parking requirements. To contextualize bylaw changes, minutes of every municipal council meeting during this timeframe (n=1,926) were analyzed using a keyword approach. We further assess two stations as illustrative examples to exemplify variability in bylaw changes and to explore some of the challenges that municipalities face in rezoning for TOD.

Our results show that, six years following the announcement of the LRT, there has been limited engagement with the zoning reforms required to support the TOD goals of density, diversity, and reduced parking ratios. While some stations have undergone significant rezoning to allow for more compact, diversified developments and the construction of adequate multi-family housing, zoning for low-density development remains thus far the norm in most areas, particularly surrounding suburban stations. These findings underscore a discordance between regional TOD plans and the realities of local municipalities. Through greater attention to rezoning processes, we also see an opportunity for improved multi-level cooperation as well as meaningful public-outreach activities in the process of building integrated transport and land-use systems. This research can be of use to policy makers as they plan for new LRT systems to understand barriers and opportunities for TOD and to ensure that adequate land-use policies are in place for municipalities to advance sustainable infrastructure transitions.

Citations

Key Words: Transit Oriented Development, light rail, land-use regulations, zoning, bylaws

PLAN INTEGRATION FOR URBAN EXTREME HEAT: EVALUATING THE IMPACTS OF PLANS AT MULTIPLE SCALES IN TOKYO, JAPAN
Abstract ID: 676
Individual Paper

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Urban extreme heat is a growing concern for communities across the globe. Climate change and the urban heat island (UHI) effect exacerbate existing problems in urban economies, public health, and urban infrastructure. Japan has been a world leader in climate change impact assessments, developing climate adaptation plans at multiple levels, and forming cooperative networks. The resilience of the built and natural environments is strongly influenced by the development and growth management guidance provided by a community’s network of plans, which often includes land use, hazard mitigation, and transportation plans, among others. These often independently produced plans guide development, and the ways they interact can significantly impact community vulnerability.

Little is presently known about the degree to which city and regional plans are spatially coordinated with national plans, or about the cumulative influence of plans at different scales on achieving climate adaptation goals and heat vulnerability reduction. This study addresses this gap by demonstrating an expansion of the Plan Integration for Resilience Scorecard™ (PIRS) to urban heat hazards in Tokyo, Japan. It utilizes PIRS™ to analyze the degree of integration and effects of plans in addressing heat vulnerability at the ward level in Tokyo, as well as policy consistency at different administrative scales.

Results indicate that the plans in Tokyo are generally well-integrated in supporting heat vulnerability reduction. Policies expanding, preserving, and enhancing green-blue networks play a critical role in heat vulnerability reduction. However, policy attention and heat exposure are often mismatched; many vulnerability-reducing policies fail to benefit the wards with the greatest exposure to urban extreme heat (the “danger zones”).

This study demonstrates the value of the PIRS™ concept and method for urban extreme heat hazards. Researchers and practitioners can apply it in additional contexts and locations to improve understanding of this growing
problem, and the ways it is affected by plan policies at various scales.

Citations


Key Words: Urban extreme heat, Plan Integration for Resilience Scorecard™, land use planning, climate adaptation, resilience planning

PLANNING FOR TRANSFORMATIVE CLIMATE RESILIENCE: BUILDING POLICYMAKERS’ CAPACITIES TO APPLY CLIMATE JUSTICE RESEARCH

Abstract ID: 741
Individual Paper

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This paper presents results of an action research project on urban planning and governance for climate justice in Southeast Asian secondary cities (Battambang, Cambodia; Khon Kaen, Thailand; and Ninh Binh, Vietnam). The project has 1) assessed policymakers and planners’ knowledge needs; 2) developed and implemented tailored capacity-building workshops based on those needs; and 3) assessed governance learning. In this paper, we argue that planners would benefit from incorporating into our research work efforts to build policy-makers’ capacities to understand and apply the knowledge we produce. We call this ‘receptive capacity.’ In this paper, we present methodological tools for building receptive capacity in research, and discuss lessons from their implementation in our work.

Applying a social justice lens to climate resilience planning can transform how planners respond to global environmental change. While we know that the barriers to basic rights and political voice in ‘divided’ societies amplify climate vulnerability, to date, most resilience efforts have focused on ‘hard’ or ‘technocratic’ infrastructural solutions. This is the case in Southeast Asia where rapid urban growth has occurred in the absence of adequate infrastructure or social protection.

There is a growing body of work that explores the vital role of citizens’ rights and entitlements in building climate resilience (Leal Filho et al., 2019; Ziervogel et al., 2017); however, most policymakers and professional planners in the region are ill-equipped to apply either the theory or findings of climate justice or political ecology work to policy. This was a key gap identified through our previous research with the five-year Urban Climate Resilience in Southeast Asia Partnership (UCRSEA) (McMillan, Kocsis, & Daniere, 2021), on which this project builds.
Our current research confirms that policy actors frame climate in primarily technocratic terms, and identifies opportunities for bridging climate justice with issues most important to them, like water and waste. While top-down governance and resource scarcities make addressing these challenges difficult, we have identified instances where creative solutions have been forged through informal or ‘shadow networks’ (Pelling et al., 2008) and by policy champions. Researchers are well positioned to leverage these opportunities as ‘brokers’ (Ernston et al., 2010) between civil society and state actors, and across scales and sectors of government. In this paper, we highlight methodological and pedagogical tools that we have found successful in our brokerage work. We illustrate how these tools can help build receptive capacity by developing collective problem framings, building empathy among differently situated actors, and helping break-down entrenched silos and hierarchies.

Citations


Key Words: Climate change, Resilience, Adaptation, Participatory action research (PAR), Southeast Asia
end made possible by constructing consensus, restructuring institutions, and transforming blight removal into social policy with self-evident strengths (Cwiek, 2019). More than a technical intervention clearing space for revitalization, demolition often serves political and economic interests that make certain futures possible while disqualifying others. An ensemble of policymakers across scales and a core of elites from across regional sectors and industries prioritized blight removal in the aftermath of the largest municipal bankruptcy in US history (Davey & Walsh, 2013).

I narrate and interpret the recent history of demolition in Detroit, MI to apprehend the relationship amongst power, profit, and wrecking the city. Demolishing Detroit’s blight assembled machinery, environments, infrastructure, authorities, ideologies, jurisdictions, databases, and supply chains. I draw on six-years of archival and qualitative research to answer the following questions: 1) How did a popular and political focus on blight and demolition shape private, public, and philanthropic approaches to Detroit’s decline?; 2) How did the Detroit Demolition Program arise as a policy solution to abandonment?; 3) How did a consensus emerge within institutional, investment, and neighborhood settings to justify clearance as a solution to local challenges?

I begin with the 2013 declaration of financial emergency and periodize Detroit’s blightocracy in four arrangements. I illustrate how a medley of Detroit leaders, investors, institutions, and organizations drew on and reproduced the climate of crisis to engineer a consensus that blight and abandonment were the defining challenges in the city. I concentrate on four arrangements illustrative of the broader local, state, and national campaign to demolish Detroit’s abandoned residential buildings and halt neighborhood decline: Kevyn Orr and the Blight Emergency; Bill Pulte and the Detroit Blight Authority; Dan Gilbert and the Detroit Blight Removal Task Force; and, Mayor Mike Duggan’s institutionalization of the Detroit Demolition Program (DDP). Each of these periods formalized and mobilized blightocracy to shape the possibility and future of Detroit’s neighborhoods. Each framed policy solutions in relation to blight. In conclusion, I show how blight removal governed Detroit’s declined and narrowed what qualified as revitalization in the city and for its inhabitants. These conclusions have clear implications for other American cities relying on residential demolition to stabilize neighborhoods and property markets.

Citations


Key Words: Decline, Detroit, Demolition

INTEGRATING AFFORDABLE HOUSING AND TRANSFER OF DEVELOPMENT RIGHTS IN PITKIN COUNTY, COLORADO
EXPLORING AFFORDABLE HOUSING INTEGRATION IN LAND CONSERVATION POLICY IN PITKIN COUNTY, COLORADO
Abstract ID: 765
Individual Paper

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Affordable housing and land conservation are not mutually exclusive, although they are often perceived as such. Many “high-barrier” communities – those communities rich with natural amenities and extraordinarily high land costs including mountain and resort towns. Examples of these communities exist across the country including Park City, Utah; Jackson, Wyoming; Aspen, Breckenridge, Telluride, and Crested Butte, Colorado; Whitefish, Montana; Taos, New Mexico; Lake Tahoe and Truckee, California; Martha’s Vineyard, Massachusetts; and Stowe, Vermont, as well as tropical destination areas with limited land for development such as Hawaii. The approach these communities are undertaking to maintain their conservation lands and ensure housing affordability, is complicated and focused on preserving the landscapes while implementing programs to counter the high costs of living in/and around these conserved lands. Many of these communities have adopted affordable housing programs and policies to address their growing affordability gap due to the market-driven prices. A few of these high-barrier communities have also adopted a transfer of development rights (TDR) programs to transfer development out of environmentally sensitive areas, known as sending areas, into areas of less environmental concerns, known as receiving or receiver areas. However, little research has been conducted to analyze the ability to integrate the two policies to enhance the benefits to the community at large.

This research focuses on mountain communities and develops a policy framework for protecting the region’s natural resources that attract tourism and -at the same time- mitigates the sequential and continuing increases in housing price for working-class households in that community. The research seeks to understand the factors associated with developing affordable and low-income housing in the area. We applied this approach by analyzing the presence/and integration of affordable housing policies and the TDR program in Pitkin County, Colorado between 1996 and 2021. A literature review was conducted to identify the critical determinants of a TDR Program success and affordable housing policies in the County. We utilized a combined evaluation framework to analyze the success of integrating affordable housing policy and TDR into one unified program using both geospatial analysis and review of key metrics from best practices. The benefit of developing a standardized framework is to enable planners and other policymakers to evaluate the success of their own TDR programs and affordable housing policies. The metrics of TDR success include:
The number of affordable housing units developed,
Acres of land conserved, and
The number of developable sites transferred using TDRs

Our evaluation concluded that while both the affordable housing and TDR programs within Pitkin County are considered successful, the ability to integrate the two programs and amplify community benefits is limited. While the areas identified as “Receiver Sites in the TDR program and the areas with approved affordable 74 housing units are in close proximity, the high price of indivual TDR, limited private lands. We also found that the -relatively-high median home price has likely impacted the ability for TDRs to be utilized for affordable housing, and thus challenged the potential intertwine of the two programs.

This paper concludes with an acknowledgement of the distinct lack of applied research and literature that discuss the interactions of TDR programs and affordable housing policies across the country. As TDR programs continue to grow in popularity and housing affordability becomes scarcer, communities will need to be addressed early and creatively. While TDR programs have been in place since the mid-1970’s and have been adopted in 38 states, this research and the emerging discussion surrounding the equity of TDR programs highlights a need for additional studies to examine the impacts of TDR programs on affordable housing programs, specifically in high-barrier communities.

Citations

Even though so much time and effort has been invested in the study of gentrification, there is still relatively little agreement regarding what this process is and how to measure it (Hawkins, 2022). While some scholars see fast increasing rent levels and property prices as the main indicator of gentrification, others focus their attention on the human component and point to significant shifts in ethnic, racial and income level composition of neighborhoods (Baker, 2019). All seem to agree that gentrification is associated with significant socio-economic changes, but there is not much agreement on how to measure them or how much change constitutes gentrification - where lies the thin line between natural progression and gentrification. Similarly, the crucial question regarding factors driving gentrification remains to be answered. In this case, some scholars stipulate that gentrification may be caused simply by an increase in the number of housing units in a neighborhood, while others argue that the cause may lie in residents’ increased demand for amenities (Hwang, 2016).

Although this study does not answer any of the above questions, it attempts to demonstrate that using different indicators of gentrification affects which city neighborhoods appear gentrified. It also shows that setting different thresholds for change affects which and how many neighborhoods are seen as gentrified. Lastly, it examines whether socio-economic characteristics (e.g. the age of housing stock, proportion of elderly population, median income) commonly believed to be associated with gentrification are good predictors of gentrification. All analyses are conducted for Salt Lake City, Utah.

To illustrate how different definitions of gentrification affect the perception of the process I selected four alternative indicators of gentrification – changes in (1) the proportion of Latino population, (2) the proportion of population with higher education, (3) median gross rent, and (4) median income. Changes in indicators are measured between year 2011 and 2019 using ACS 5-year data. The lowest threshold (LOW) of change is equal to the city-wide mean change in that criterion in the same time period, while the highest one (HIGH) is set at a level that results in a number of gentrified tracts that allows to build a meaningful linear regression model. The medium threshold (MEDIUM) is set to generate approximately half of the gentrified tracts. I use multivariate linear regression models to examine which characteristics of the gentrified tracts in 2011 are best predictors of gentrification by year 2019. For independent variables I use a set of factors that have been widely acknowledged to affect or cause gentrification, e.g. median household income, percentage of owner occupied housing units, percentage of Latino population, percentage of structures built before 1939, percentage of single family homes (single unit structures), median gross rent.
Even after considering the many limitations of this simple study, some facts emerge that might affect the way we think about gentrification. First, there is either very little or no correlation between the four indicators of gentrification selected for this study, which are also commonly used as criteria for identifying gentrified areas in general. This means that using any of the four indicators individually will always yield different results – show different sets of tracts as gentrified. Second, applying different gentrification indicators (in this case four of them) results in very different sets of tracts deemed as gentrified. Third, applying all four indicators jointly results in no tracts showing as gentrified. The overly simplified conclusion is that not only there is no one definition and indicator of gentrification, but most importantly that the choice of definition and indicators determines what areas are perceived as gentrified.

Citations


Key Words: Gentrification, Indicators of gentrification

RUBBER STAMPS AND RISK: PERMITTING AND USE CHANGES IN FLOOD-PRONE AREAS.

Abstract ID: 999

Individual Paper

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As models of the physical effects and risks of climate change become increasingly fine-grained, public planning and policymaker energy is pivoting to the implementation of adaptation plans. To translate goals into action and justice, planning processes must endogenize politics, networks, and terrains of historic injustice (Shi et al, 2016). Yet institutional inheritances, inertia, and the scale of need, threat, and funding all raise a specter of our professional history. Are adaptation plans doomed to repeat the same distortions of comprehensive ambitions past?

This paper examines a very small slice of day-to-day implementation -construction permits and use changes- in areas with determined risks of pluvial or coastal flooding. Drawing on two multi-municipal databases of construction permits across metropolitan Guadalajara and central New Jersey - and supplemented by interviews, the article analyzes when and where permits and land use changes are approved in flood-prone areas, and how these fluctuate (or not) based on risk designations, staff networks, and elections. In both locations, designations of risk are taken from a public organization, and the time period of that becoming available to the municipality is noted. Using municipal paperwork as a base, the paper models current patterns of practice with a particular focus on shifts that have occurred after plans or political transitions. The findings, situated across their diverse contexts, hint at some contours of what a ‘co-produced’ adaptation governance future might look like, with specific recommendations for local adaptation plans.

Building on work identifying drivers for adaptation plan-*making* in local governments (e.g. Kalbarczyk and Kalbarczyk, 2022), emerging scholarship on adaptation provides insights into the plan-*doing* of adaptation across ethnographies of the state (Bhardwaj and Khosla, 2021), bureaucratic learning (Angeles et al 2021), and environmental justice and co-produced governance possibilities (Visconti, 2023). Understanding the details of these processes is essential to change the status quo, as relocation, recovery funds or prevention programs, adaptation-in-practice almost alway reinforce existing inequalities of class, race - typically creating a ‘double
burden' of environmental injustice and future climate risk. Ethnographic research of single cases often provides nuance on the mechanisms through which the familiar dilemma of clear technocratic ‘solutions’ produces uneven and slow rollout. Along with the findings for practice, this paper also suggests that another pathway exists to examine implementation through mixed-methods analysis of the temporal streams of permitting and land use.

Citations


Key Words: climate adaptation, construction permits, land use changes, municipalities, flooding

SPATIOTEMPORAL ANALYSIS OF MIXED-USE PLANNING & PATTERNS

Abstract ID: 1025
Individual Paper

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Land use integration has emerged as an important sustainability principle in the planning paradigm, with mixed-use developments being positively linked to different environmental, health, economic and social benefits (Grant 2002). However, most planning jurisdictions in the United States have traditionally had strict land use ordinances that largely restrict the mix of different land uses within close proximity (Talen 2012). In the last two decades, many cities in the nation have started instituting ordinances that emphasize mixed-use (Jepson & Haines 2014). As more jurisdictions continue to reform their land use policies to become more mixed-use friendly, it becomes increasingly crucial to understand the scope of those changes and the impacts of the revised regulations. Relevant empirical assessments are scarce, and they focus on the planning or spatial aspect separately, providing partial pictures of the subject matter (Hirt 2007; Rabianski 2009). Moreover, these assessments are relatively outdated, covering mixed-use planning and development trends up to the early 2000s.

Using a sample of four American cities– Milwaukee, Raleigh, St. Louis, and Tampa– where planning efforts to promote mixed-use developments had taken place by 2010 and historical land use and zoning datasets are accessible, this paper investigates (1) to what extent these cities allow and promote land-use mix through their plans and ordinances and (2) whether they have become more mixed-use since 2010. More specifically, this study focuses on the integration of residential and commercial land uses that proponents believe contribute to the livability and sustainability of neighborhoods.

The content-analysis of comprehensive plans and zoning ordinances confirms that these municipalities have visions and policies to become more mixed-use. For instance, they have established and increased mixed-use zones and future land use designations that permit varying levels of residential and commercial mix. Areas where
the permitting of mixed-use developments are not restricted have grown since 2010, but substantial sections of
these municipalities still restrict or only allow limited mixed-use developments. Mixed-use developments are
typically allowed in corridors that extend from downtowns.

The quantitative spatial analysis examining the on-the-ground evenness of residential and commercial land areas
using the Balance Index showed on average that there was greater mix in 2023 as opposed to 2010, but the
integration of land uses was not uniform throughout each jurisdiction. Noteworthy positive changes mostly cluster
in downtowns and select areas. Predominantly low-density residential census tracts where land-use segregation
has always been the norm have remained mostly unchanged.

Moreover, this study identifies areas where land use integration efforts and mixed use developments are lacking.
These findings highlight advances, limits, and uneven spatial patterns of ongoing mixed-use efforts in American
cities that should be considered in future land use integration planning, discourse, and movement.

Citations

• Jepson, Edward J., and Anna L. Haines. 2014. “Zoning for Sustainability: A Review and Analysis of the
  239–52.

Key Words: Mixed-use development, Land use reform, Zoning, Spatio-temporal assessment, Sustainability

LAND USE, PHILANTHROPY, AND THE LEGACY OF ‘DETROIT FUTURE CITY’
Abstract ID: 1057
Individual Paper

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Ten years ago, a handful of philanthropic foundations published Detroit Future City—a bold, fifty-year land use
vision for a smaller, greener metropolis. This multi-million dollar initiative, created in the wake of the Great
Recession, urged policy-makers to ‘right-size’ Detroit—concentrating its future residents in a handful of priority
neighborhoods, and designating other areas as productive or passive open space. But while the feasibility and
equity implications of Detroit Future City, and similar right-sizing initiatives, have been soundly criticized (see, for
example, Hackworth, 2019), less is known about the institutional arrangements that shape philanthropic influence
on urban planning in the United States (Thompson, 2021). Detroit Future City straddled two mayoral
administrations, as well as the tenure of a state-appointed emergency manager, and its staff strove to get their
recommendations adopted as Detroit’s official land use policy—nearly succeeding. In this paper, drawing on
extended ethnographic fieldwork inside Detroit City Hall, as well as in-depth interviews with philanthropic
representatives, I examine how this privately-funded initiative almost became public policy, and why, ultimately, it
fell out of favor. Some of the reasons for non-adoption—such as a mayoral transition, practical constraints on
nonmarket land use ideas, and a deep-seated devotion to the growth paradigm—align closely with Ryan and Gao’s
(2019) analysis of plan implementation hurdles in the context of shrinking cities. But other important factors were
also at play, not least the denuded capacity of the City’s own planning department, where austerity-hit planners, ostracized by the Detroit Future City process, were subsequently reluctant to advocate on its behalf. With Harvard legal scholars already citing Detroit Future City as a problematic case of so-called ‘patriotic philanthropy’ (Lemos and Charles, 2018), this paper seeks to add a planning-orientated voice to the academic literature in political theory concerning elite philanthropy’s relationship to public policy, and the risk that its plutocratic bias poses to local democracy.

Citations


Key Words: land use, philanthropy, austerity, comprehensive planning, Detroit

FARMLAND TO PLOT-WISE RESIDENTIAL DEVELOPMENT: PARSING THE (MISSING) DETAILS OF LAND CONVERSION
Abstract ID: 1067
Individual Paper

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While extant literature sheds valuable light on the causes and consequences of land-related tussles in urban peripheries, what remains less understood are the comparatively silent nature of land-related transactions taking place outside of the scholarly obsession with focus on large-scale flagship developments. If peri-urbanization, as Webster (2002, p. 1) writes, is to be understood as “a process in which rural areas located on the outskirts of established cities become more urban in character, in physical, economic, and social terms, often in piecemeal fashion”, then understanding the incremental (partly extra-legal) processes of land commodification merits equal, if not more attention. Based on a multi-situated ethnography of select residential housing developments in four distinct “pockets” around the city of Chennai, India, this paper will highlight the nature of negotiations influencing the speed, legitimacy, and cost of agricultural land conversion for residential development.

A focus on plot-wise land conversion, I find, is a particularly useful tool to examine the highly fragmented yet widespread nature of homeownership and entitlement that currently shapes Chennai’s urbanization. I link the historical site-specific factors shaping conversions (obtained through archival analyses and interviews with long-time residents and local governments) to the observed fragmented patterns of residential development (via interviews with select builders, land mediators and homeowners). The work will highlight the importance of understanding the drivers of land use conversion and development through time.

Citations


Key Words: Peri-urbanization, Land conversion, Residential housing development, Builders, Developers

ASSESSING SHADE INFRASTRUCTURE IN THE CITY
Abstract ID: 1075
Individual Paper

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Shade is one of the most effective ways to cool people outdoors when it is hot outside and will be a critical tool for cities adapting to hotter conditions under climate change. Yet, few cities are explicitly planning shade infrastructure. One barrier to including shade in land use planning is that few cities have ways to access what casts shade, where, and when. This study aims to develop a generalizable framework for characterizing urban shade infrastructure in the city that makes data accessible for land use planning. Specifically, we evaluate how shade production varies by Local Climate Zones (LCZs), which is widely used by urban climate scientists to characterize microclimate conditions. Specifically, we investigate the impact of green and engineered environmental features on shade production across different types of LCZs (n=120) in the dryland mega city of Los Angeles, California. We found that compact low-rise types of development had the least total shade, despite having more tree shade than mid-to-high rise development due to the abundance of unmanaged building shade associated with taller built form. LCZ explained 25% and 40% of the variation in total and tree shade, respectively. We found that across all LCZ types, low income areas consistently had less shade than high income areas. We conclude that the role of building shade merits more explicit consideration— in addition to urban forestry—in land use planning for urban shade infrastructure. Moreover, we conclude that LCZ may have limited utility in land use planning for shade, especially in addressing disparities based on income.

Citations
• Roman et al. 2020. Beyond ‘trees are good’: Disservices, management costs, and tradeoffs in urban forestry. Ambio, 50:615-630.

Key Words: Shade, Heat, Climate, Adaptation, Trees

SCIENCE-POLICY CO-PRODUCTION OF HEAT PLANNING KNOWLEDGE IN KENT, WASHINGTON
Abstract ID: 1101
Individual Paper

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Extreme heat is the deadliest climate-related hazard in the United States (U.S.) and is the leading cause of weather-related mortality worldwide. Cities are warming 50% faster than surrounding areas, exposing urban residents to elevated risks for dangerously hot temperatures. Many larger U.S. cities are making progress towards heat initiatives such as creating heat readiness plans, implementing cool/green roof projects, increasing the urban tree canopy coverage, and increasing public education about the impacts of heat. While larger and well-resourced cities are actively planning for heat risks, less is known about how smaller and medium-sized cities, often with fewer resources and more limited planning capacity, are addressing heat risk. More broadly, smaller city climate planning is not well studied, even though 46% of the U.S. population lives in cities with populations below a million. To address the lack of understanding of heat planning in smaller cities we use a co-production of knowledge approach, along with the PIRS™ for Heat methodology to analyze four City of Kent plans selected by the practitioners from Kent, WA, and King County. We created a scorecard based on our plan analysis, and then compared the scorecard with urban heat and social vulnerability maps. We collaborated iteratively with the city and county throughout the research process, including during plan selection, policy mapping, and after the analysis. Results suggest that heat mitigation policy attention is focused in more socially vulnerable areas of the city, but those areas may not be the hottest. Additionally, city officials found the process and results helpful. It has increased collaboration between city departments surrounding heat.

Citations


Key Words: Extreme heat, Knowledge co-production, heat governance

EVALUATING URBAN HEAT MITIGATION ACROSS NETWORKS OF PLANS

EVALUATING URBAN HEAT MITIGATION ACROSS NETWORKS OF PLANS

Abstract ID: 1179

Individual Paper

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Climate change and the urban heat island (UHI) effect is increasing the number of dangerously hot days and the need for all communities to plan for urban heat resilience equitably. The severity of the UHI effect is influenced by the way the built environment is planned, designed, and operated (Stone & Rodgers, 2001). The collection of
community plans that shape the built environment is called a “network of plans” (Berke et al. 2006), but this network of plans is often not coordinated, leading to misaligned planning efforts or even increased risk. Urban heat resilience requires an integrated planning approach that coordinates strategies across community plans and uses the best available heat risk information to prioritize heat mitigation strategies for the most vulnerable communities. These heat mitigation policies are those that potentially reduce or increase the UHI effect, related to land use changes, urban design, urban greening, and waste heat emissions (Keith & Meerow, 2022).

The Plan Integration for Resilience Scorecard™ (PIRS™) for Heat is an approach that communities can use to analyze how heat mitigation policies are integrated into different plans and to identify opportunities to better target heat mitigation policies in high heat risk areas. The PIRS™ for Heat was developed as an extension of the original Plan Integration for Resilience Scorecard™ (Berke et al., 2015; Malecha et al., 2019), a methodology for spatially evaluating networks of plans to reduce vulnerability to flood hazards. We piloted PIRS™ for Heat with planners and decision-makers in five geographically diverse U.S. communities, including Baltimore, MD, Boston, MA, Fort Lauderdale, FL, Seattle, WA, and Houston, TX.

Adapting the original approach to heat, the project team analyzed all policies in each community’s network of plans, including their comprehensive plans, hazard mitigation plans, climate action plans, and climate change adaptation, resilience, or sustainability plans. Policies were only included if they had the potential to impact urban heat, were place-specific and contained a recognizable policy tool. Policies were then scored based on whether they would likely mitigate heat (“+1”), worsen heat (“-1”), or the impact was unclear from the description in the plan (“Unknown”). Scored policies were mapped to relevant census tracts across the communities to evaluate their spatial distribution and the net effect on urban heat. The resulting PIRS™ for Heat scorecard was then compared with physical and social vulnerability data to assess policy alignment with heat risks and to identify opportunities for improved urban heat resilience planning.

Across all five cities, plans contained many policies that would likely impact urban heat, but this was rarely acknowledged. Policies that provided enough detail to be scored were much more likely to enhance heat resilience than worsen it. Some categories of policy tools and heat mitigation strategies were more common than others. We found that heat mitigation policies, for the most part, do not target the hottest or most vulnerable communities. We also found that heat and vulnerability are not necessarily co-located, meaning planners should use multiple data sources when determining where to focus heat mitigation policy attention. The results from this project were shared with partner communities to improve plan integration efforts, and the PIRS™ for Heat approach and pilot city results were published into a publicly accessible guidebook.

Citations

Key Words: plan integration, network of plans, heat planning, climate change, resilience

CLIMATE JUSTICE AND POLICY DIFFUSION IN THE U.S. CITIES- THE MECHANISMS OF INTERNAL AND EXTERNAL DIFFUSION
Abstract ID: 1186
Individual Paper

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Climate justice has emerged as a crucial concern in policymaking, focusing on safeguarding the rights of vulnerable and disadvantaged groups and ensuring the equitable sharing of climate change's impacts. Numerous US cities have begun incorporating climate justice considerations into their policies, but the processes through which local governments adopt these policies remain unclear, despite the significant attention given to climate adaptation work in the literature. To address this gap, this study employs policy diffusion theory and logistic regression modeling to analyze the adoption of climate justice in city government policy-making processes. The study draws on data from Diezmartínez and Short Gianotti's (2022) open data repository, which contains official climate action plans from the largest 100 US cities. The research aims to examine how various determinants of external and internal diffusion, such as learning, imitation, normative pressure, competition, coercion, budget, manpower, and knowledge, influence cities’ engagement with climate justice.

Citations


Key Words: Climate justice, Policy diffusion, Urban governance

UNDERSTANDING FLOODPLAIN DEVELOPMENT: WHAT ARE THE MULTI-DIMENSIONAL FACTORS INVOLVING FLOODPLAIN DEVELOPMENT?
Abstract ID: 1211
Individual Paper

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Development in floodplains is a critical issue in climate change adaptation. Limiting new development in the areas should be a high-priority strategy to protect life, reduce flood loss, and minimize public expenditure on recovery. However, approximately 25.3 million people (or 8.3 percent of the total population) live in high-risk flood zones in the US, and physical development in floodplains in inland counties has grown between 2001 and 2011 despite a decline in the development in coastal flood areas(Qiang et al., 2017). This continuing floodplain development has significant implications for society since the average 100-year floodplain is projected to increase by 45 percent by
the end of this century as the frequency and intensity of localized floods exacerbate (EPA, 2022). The National Flood Insurance Act of 1968 created the National Flood Insurance Program (NFIP) to reduce the cost burden of floods on the federal government and to mitigate flood risk (Bullock et al., 2020; Strother, 2018). However, despite implementing the NFIP for over 50 years, discouraging development in floodplains remains a challenge. Continuing floodplain development emphasizes local conditions in a regional context in the development of the floodplain (Loschner et al., 2017). The local conditions could be multi-dimensional and may go beyond land-starved developers, tax-starved local governments, and the limitations of the NFIP. The conditions may include the topography of floodplains and local and regional spatial distributions of vulnerable populations, land use and land development patterns, growth pressure, and socio-economic dynamics.

This paper investigates the multi-dimensional factors involving floodplain development in the Kansas City metropolitan region, where floodplain development has been continued along sprawl due to the absence of substantive physical barriers limiting urban expansion. The paper will analyze demographic, socio-economic, built environment, and natural environment factors associated with spatial patterns and the type of floodplain development in the 100-year flood zone. The unit of analysis will be a census block group, and a Poisson or negative binomial model will be employed for statistical modeling. Data for the analysis will be derived from the census, national flood insurance program, and remote sensing. The paper will contribute to facilitating climate adaptation strategies involving floodplain development.

Citations


Key Words: Floodplain development, Climate change, Climate adaptation

SUCCESSFUL STREETCARS: THE CASE FOR COORDINATED LAND USE AND TRANSPORTATION

Abstract ID: 1245
Individual Paper

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Streetcars have returned to many cities in the United States, and still more cities are contemplating launching their own streetcar operations. Yet not all of them are equally successful or ever live up to initial expectations. Studies based on interviews with key stakeholders find that planners and policy makers in cities with most successful streetcar operations explicitly think about this type of transit as both a transportation service and a development tool (Ramos-Santiago, 2016). A suite of coordinated land use and transportation policies is often required to encourage new development in the streetcar corridor. New zoning and parking regulations, new form-based development codes, and other development supportive policies are introduced by the most successful cities to encourage more dense development near transit and significantly increase potential development capacity.
(Brown, 2015). In fact, since approximately three-quarters of all expected benefits from streetcar projects are generated through property development, development supportive zoning is repeatedly quoted as one of the key factors affecting the success of a new streetcar operation (King, 2016).

Since its inception in 2013, the Salt Lake City’s streetcar operation (the S-Line) has been instrumental in revitalizing the Sugar House District and the city of South Salt Lake’s most northern sections, helping to bring to the area more than 2000 new housing units, close to 300,000 square feet of new retail space and over 550,000 square feet of new office space. Since its launch, the area has benefitted from nearly USD 2 billion of economic growth. To understand the role of zoning in creating conditions for this growth we conducted the total of 7 interviews with developers and city planners from the two cities that the S-Line runs through (Salt Lake City and South Salt Lake).

Both Salt Lake City and South Salt Lake have introduced high density, development supportive zoning in the S-Line corridor. The Sugar House Business District zoning (Salt Lake City) was initially introduced in 1995, but it wasn’t until after the S-Line opened in 2013 that the major development in the area took off. “It really wasn’t until the streetcar line that we started to see an investment there. That was the turning point.”, says Nick Norris, the Planning Director for Salt Lake City. Since then, most of the S-Line corridor on the Salt Lake City’s side has been zoned either as Sugar House Business or Form Based Special Corridor, allowing for higher density and mixed use. South Salt Lake went even further and planned its new Downtown District along the S-Line corridor: “We wanted to take a completely different approach and actually create a Downtown for South Salt Lake.(..). And it’s our Downtown District form based code, which was passed in 2016. That district has unlimited density. There’s also no height limit”, explains Alexandra White, the Community Development Director for South Salt Lake.

The importance of zoning was further confirmed by the testimonials given by the interviewed developers. When asked to what extent their decision to build in the S-Line corridor was influenced or determined by the zoning, they replied: “From our standpoint, it really encouraged the density we wanted. It was a relatively easy process.”; “[South Salt Lake] really made an exerted effort to create basically a downtown South Salt Lake. It’s in that component of their zone where we’re doing the development. They were really promoting the kind of development that we’re doing.”

The combined factors of the S-Line and zoning have promoted the immense growth that we can see in the area. The zoning and the streetcar complement each other creating perfect conditions for property development and economic growth.

Citations


Key Words: Streetcars, Zoning, Coordinating land use and transportation

COMPARING CAMPUS SUSTAINABILITY: HOW DOES UNIVERSITY GOVERNANCE RELATE TO PERFORMANCE?
Abstract ID: 1331
Individual Paper

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Sustainability practices can be adopted by universities as both part of their curricula and the operations and management practices of their campuses. Both the academic and physical realms require leadership, thus we argue that campus sustainability is closely related to university governance. Governance structures are determined by policies and regulations; they establish allocation of resources and hence the priority given to actions and implementation of various initiatives. To a certain extent, governance structures also influence curricular priorities; programs may be funded (or not) to focus on sustainability education.

We are interested in the extent to which these two systems are aligned. For example, a university may start new programs and degrees related to sustainability because there is a demand within their community or because their peers are experiencing growing enrolments but not “practice what they preach.” This could be verified through an analysis of their operations showing their carbon footprint, lack of energy efficient buildings, low or no use of renewable sources of energy, and a lack of sustainable waste management practices. Other examples would include outreach programs, partnerships with actors in the broader community and instances of behaviour change over time. The physical environment of university campuses can demonstrate the complexities related to sustainability goals. University campuses can be a living laboratory to experiment and develop sustainability strategies, and to create and implement new solutions for energy efficiency and healthy living. This premise suggests that when universities adopt operations and management practices that incorporate sustainability principles, students internalize behaviours that would be valuable in integrating sustainability practices to their professional and personal lives.

This research compares the level of commitment to sustainability in Canadian and Australian universities. We analyze the governance structures of several universities using both qualitative and quantitative data. The qualitative portion comprises discourse analysis of plans and documents, such as campus master plans, net-zero policies, and procurement policies, as well as interviews with sustainability officers. The quantitative analysis is based on scores from standardized campus sustainability performance systems such as AASHE’s STARS program and the Impact Rankings of Times of Higher Education. This analysis determines the level of commitment of universities and the extent to which they are using their campuses as a living lab whilst also offering their students the necessary education and skills required for a holistic understanding of sustainability and sustainable practices. Through this analysis we also intend to determine the levels of accountability and how it is operationalized: Are targets being set? Are there triggers that identify faulty metrics? Are there reports on progress towards targets? In addition, the curricular analysis determines the degree to which key sustainability concepts are embedded into curricula and the instances of embedding of the core competencies. These measurements are based on a framework being developed by the Global Council for Science and the Environment (GCSE). The results provide a sample of how universities in two countries compare to one another on university governance related to sustainability. The methods used in this project are replicable and can be easily and broadly applied to compare additional universities.

This work is relevant to university leaders, educators, campus planners, students, and anyone interested in sustainability education. University campuses can be part of the solution and increase the exposure of students to sustainability practices and principles that will ultimately improve our built environments. Ensuring that university governance structure provide optimum incentives to incorporate sustainable practices into their policies and operations is but one way to implement change and start a trend towards greener, healthier, and more energy efficient places.

Citations


Key Words: campus sustainability, university governance, sustainability curriculum, sustainable practices, sustainability indicators

A MULTICRITERIA EVALUATION OF LOCAL E-GOVERNMENT IN TERMS OF CITIZEN SATISFACTION

Abstract ID: 1342
Individual Paper

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E-Government is one of the most critical lines of Digital Society and Public Administration modernization. The main benefits described in the literature are related to the decrease in the number of trips, transaction costs and waiting times (see, e.g., Piotrowski, 2009 and Wong et al., 2011) but also to positive impacts on transparency, accountability, and reputation of public authorities. (See, e.g., López-López et al, 2018, Jun et al, 2014, Spirakis, 2010 and Kim and Lee, 2012).

Local E-Government is particularly significant because local authorities are supposed to be the branch of public administration in closer interaction with citizens. They also cover a broad spectrum of services and competencies. However, such a wider spectrum tends to be quite challenging due to the need for integration between them and with many sectors of central administration (Bromberg and Manoharan, 2015).

Furthermore, since the Agenda21 approval (UN, 1992) and more recently with the 2030 Agenda for Sustainable Development (UN, 2015), local authorities must have an agenda pursuing sustainability. Within this framework, Local E-Government is key in promoting a wide range of initiatives, such as reducing emissions and avoiding paperwork (Saha, 2009).

This importance explains the long list of contributions evaluating Local E-Government websites (see, e.g., namely, Australia: Sterrenberg, 2017; Canada: Reddick, 2012; Europe: Perez-Morote et al., 2020; India: Kumar and Sareen, 2012; Japan: Wong et al., 2011; New Zealand: Asgarkhani, 2005; Sri-Lanka: Deng et al., 2011; Turkey: Karkin & Janssen, 2014; UK: Carter et al., 2016; USA: Carbo & Williams, 2004; etc.).

Mainly, these works tend to focus either: (i) on the website features (see, e.g., Falco & Kleinhans, 2018) or on the organizational aspects of E-Local Government, including models of quality of service (see, e.g., Asgarkhani, 2005). However, they don’t focus on citizens' satisfaction using the local E-Government sites, which explains why the objective of the research presented in this paper is the development of a satisfaction model for citizens to evaluate Local E-Government sites (LGS).
Within this framework, three research questions emerge: how can such satisfaction be modelled, which attributes should be considered and described, and how can citizens assess the relative importance assigned to each attribute?

Citizen satisfaction due to the use of a website can be described in terms of (i) the easiness of the website use; and (ii) the benefit stemming from it. These two perspectives should be modelled in terms of a set of attributes, and for each attribute, a descriptor and a score function should be specified. Then, the problem of integrating the evaluation of such attributes by the citizen must be solved. Several statistical techniques exist to solve it, such as Principal Components, Factor Analysis or Cluster Analysis (OECD, 2008). However, they don’t consider the relative importance assigned by the citizens to each attribute. Therefore, a multi-attribute approach will be adopted in our research, and such relative importance should emerge from a sample of citizens.

The model developed is based on the MAUT (Multi-Attribute Utility Theory, Fishburn, 1970 and Deyer, 2016), which has a complete theoretical foundation based on the Probability Theory, the axioms of preferences, and the Utility Theory (Loken, 2007).

Summing up, the original contribution of this paper is the development of an instrument of citizen satisfaction related to the use of LGS based on a tree structure covering the most relevant attributes. This instrument is applied to a set of Portuguese municipalities, revealing a high level of disparity and confirming how vital its application can be to assess inter-municipalities benchmarking, diagnose their significant shortcomings and support the design of a road map for improvement.

Citations


Key Words: E-Local Government, Citizen’s satisfaction, Multi-Attribute Utility Theory, Attributes tree, Benchmarking of websites

THE SAGA OF THE SLOT HOUSE: THE INADVERTENT ORIGINS, CONTROVERSY, AND EVENTUAL TAMING OF A NOVEL HOUSING FORM IN DENVER
Abstract ID: 1350
Individual Paper

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As more US cities contemplate and execute substantial reforms to heretofore rigid single-zoning ordinances (Manville, Monkkonen, & Lens, 2020), interest is rising in the comparatively few cases in which such reforms are both recent enough to be relevant but also ripe enough to have yielded palpable results on the ground. The case of Houston, which made key reforms beginning in the late 1990s, producing tens of thousands of small-lot townhouses as a result, has recently come to be better known (Gray & Millsap, 2020). The case of Denver is less well-known, but also offers important lessons to those seeking to unlock a greater variety of house-scaled but more land efficient housing types in erstwhile “residential” neighborhoods, i.e., those primarily made up of single-family houses.
In Denver, unlike in Houston, the novel housing form in question arose in the wake of a citywide comprehensive plan and rezoning effort that was heavily influenced by New Urbanist ideals. “Slot houses” were not anticipated in the new zoning districts, but instead were an innovation on the part of local developers who discovered that perpendicularly oriented townhouses were a land-efficient and locally in-demand for-sale housing product in certain neighborhoods in the urban core. The relevant reforms were enacted prior to the recovery from the Great Recession, and thus were already in place once the local housing market boomed, enabling small builders to execute them via by-right land use approvals. Slot houses acquired their pejorative local moniker in reference to the claustrophobic walkways that often separated two rows of townhouses within a single development. Their jarring appearance and juxtaposition with existing, primarily single-family houses fueled local controversy and media coverage.

This study examines the origin, emergence, and controversy phases of Denver’s slot house saga, as well as what happened next: their reform and normalization. The prevailing land use status quo of the “zoning straitjacket” (Ellickson, 2021) might lead an outside observer to assume that the controversy engendered by slot houses would lead to a swift retrenchment of the rezonings that made them possible. Instead, Denver made incremental reforms that quelled the most vociferous controversy surrounding slot houses but allowed them to persist. Through the use of site observation, in-situ interviews, and quantification of redevelopment outcomes via parcel-level data, I reflect on the lessons in unintended consequences, iterative reform, and responsiveness to local concerns that Denver’s slot house saga offers for other US cities embarking on similar efforts to diversify their single-family dominated housing stock.

Citations


Key Words: Slot houses, Redevelopment, Residential parcels, Regulatory reform backlash, Denver

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**Better Health for Whom? Exploring the Relationship Between Pedestrian-Oriented Zoning Reforms and Gentrification**

Abstract ID: 96
Research in Motion (RiM)

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Central theme: Pedestrian-oriented zoning (POZ) reforms have the potential to improve opportunities for physical activity by encouraging mixed uses, walkability, and multi-modal transportation. POZ reforms generally allow higher density development by right, compared to traditional zoning, and often include requirements for built environment improvements (e.g., wider sidewalks, pedestrian plazas, etc.) with new development. Increased
investment, higher density development, and improved built environment features may lead to increases in housing values and neighborhood desirability, which has been associated with gentrification and displacement. This research aims to explore the relationship between POZ reforms and gentrification, as gentrification may disrupt the potential positive impact of increased physical activity opportunities for legacy residents by causing cultural and/or physical displacement pressures following zoning changes.

Approach and Methodology: A literature review was conducted on gentrification and POZ reforms. POZ data were collected as part of a larger longitudinal study on zoning and physical activity. Zoning codes in effect as of 2020 for 2298 jurisdictions in the 200 most populous counties in the U.S. in 41 states and DC were assessed using a systematic audit tool that captured the inclusion of POZ reforms. Census tracts where POZ reforms have been adopted will be identified and linked to U.S. Decennial Census and American Community Survey 5-year estimate data to assess trends in socio-demographic, jurisdiction, and housing characteristics over a 40-year period (1980 through 2020). Variables of interest include race/ethnicity, household income, educational attainment, median rental and home values, poverty, and vacancy levels.

Findings: While POZ adoption in the U.S. has increased dramatically over the last 20 years, to date, there have only been two studies to quantitatively assess the impacts of POZ adoption on gentrification-related outcomes. Neither found evidence of gentrification impacts. However, qualitative studies have revealed community concerns over gentrification and displacement following POZ adoption. Additionally, the impacts of transit infrastructure (vs. zoning) on gentrification have been more widely studied and there is evidence of an association, although results are mixed. My quantitative sample will include around 300 jurisdictions that have adopted POZ for a district or corridor. As this research is currently in process, results for the quantitative analyses are forthcoming.

Relevance for Planning Practice and Scholarship: Despite the growth in POZ adoption over the past 20 years, there have been relatively few studies evaluating their effects on gentrification. The proposed research fills an important gap in the existing literature. If POZ reforms are positively associated with gentrification, municipalities adopting these zoning changes should also consider affordable housing and anti-displacement strategies to promote inclusive and equitable development while trying to promote improved walkability.

Citations


Key Words: Pedestrian-oriented zoning reforms, gentrification, walkability, health equity

UNDERSTANDING FIRST NATION/PLANNING CONSULTANT RELATIONSHIPS
Abstract ID: 283
Research in Motion (RiM)
Across Canada, Indigenous communities are planning. Many Indigenous communities across Canada hire planning consultants to support growing planning needs. There are many planning firms in Canada that work with Indigenous communities, including both small firms that specialize in planning with Indigenous people and larger firms that list this as an area of practice. This work departs from the dichotomy of private versus public clients for consultancy work and raises new questions about the ethical and practical challenges of supporting Indigenous clients whose specific needs vary from and may conflict with mainstream public and private entities. Many firms that provide services to Indigenous communities are non-Indigenous. This insider/outsider relationship raises important concerns pertaining Indigenous/non-Indigenous relations, and to local knowledge and capacity development, including the principles of Indigenous ownership, control, access and possession. The relationships are also faced with the challenges of intercultural planning, including differential paradigms of what it means to be in a relationship; Indigenous notions of relationality may be contrary to mainstream transactional framings of a client-consultant dynamic. Despite a rise in these relationships evidenced anecdotally and by services advertised by planning firms, very little is known about their extent and the ethical, practical, and theoretical implications of this work. Given the Canadian planning profession’s focus on reconciliation with Indigenous peoples, this lack of knowledge is a substantial oversight that is addressed through this research.

This research: examines the scope of First Nation/planning consultant relationships in Canada to advance understandings of the ethical and practical challenges of consultant/client relationships outside the public/private binary; critically explores these relationships through the lens of reconciliation at different scales; and develops a theoretical concept for understanding the relational complexity of these relationships building on Shane Edwards’ concept of (k)new space. The study design includes the collection of ‘practice stories’ in the form of semi-structured interviews with First Nations lands managers who have experience working with hired planning consultants and with planning consultants who have experience working for First Nations clients. The findings of this study provide insight into the ethical and practical challenges of this work and implications for professional reconciliation. The findings inform the development of future policy, including professional codes of conduct for private practice, and advance theoretical conceptions of planning with Indigenous peoples and planning consultancy.

Citations


Key Words: Consultancy, Indigenous, Intercultural, Reconciliation, Settler-colonialism
This research examines Florida local government policies that address development in the places where people, property, and infrastructure are most at risk from storm surges. Under Florida Statutes, Coastal High Hazard Areas (CHHA) are defined as the area below the elevation of a Category 1 storm surge line and are those places most likely to be significantly damaged or submerged by sea water. Florida requires that local governments designate CHHA areas within the local comprehensive plan and limit CHHA development in accordance with the hurricane evacuation capacities supported by local transportation infrastructure. Although Florida’s CHHA rules have changed over time since first adopted as part of the 1985 Growth Management Act, the overall intent has been to limit development in the CHHA for the purpose of maintaining evacuation capacity and minimizing loss related to public infrastructure and other public expenditures (Puszkin-Chevlin and Esnard, 2009).

Many Florida communities have long-established policies prohibiting additional residential density in the CHHA, resulting in zoning codes that are “frozen in time” (Puszkin-Chevlin and Esnard, 2009, 36). This led to concerns about the abilities of some communities to accommodate projected population growth, support economic development, and provide affordable housing. These concerns were amplified following a 2016 update to the Florida Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model used to identify the CHHA. In many communities, the update resulted in a significant expansion of the CHHA. For example, the City of St. Petersburg faced a 41% increase in the CHHA following the 2016 model update; this in turn resulted in text amendments to their Comprehensive Plan in 2020 that shifted from a strict prohibition of new development in the CHHA to a criteria-based project evaluation approach.

This research provides a survey of Florida local government policies for accommodating residential density in the CHHA. Specifically, it addresses three research questions:

- What are the local government’s baseline rules for addressing new density in the CHHA?
- How have requests for additional density in the CHHA been decided over the last decade?
- What changes to the CHHA density rules have been considered or adopted since the 2016 update?

The session will include results from a scan of Florida local government comprehensive plans that include Coastal Management Elements to identify policies for addressing new density in the CHHA. Policies were analyzed to identify major approaches, such as those that strictly limit new density, those that incorporate incentives such as transferable development rights that direct density to specific areas, and those that use criteria such as building code or hurricane evacuation standards to permit density increases. The research demonstrates that most Florida local governments strictly limit new residential density in the CHHA, although a trend of accommodating more residential density is emerging, especially in areas with high land values.

The research will provide information about best practices in addressing density in flood prone areas. Florida’s experiences provide instructive lessons on the balancing act involved between protecting human lives and public assets, cooperating with market processes, preventing climate gentrification, and accommodating demand for housing and redevelopment near existing urban infrastructure.

Citations


Key Words: Density, flood, sea level rise, evacuation, coastal

THE IMPACT OF PLANNING INSTITUTIONS ON RURAL RESTRUCTURING DRIVEN BY IN-MIGRATION: A COMPARATIVE STUDY OF THREE COMMUNITIES IN CHINA USING HISTORICAL INSTITUTIONALISM
Abstract ID: 731
Research in Motion (RiM)

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In recent years, there has been a growing trend of urban residents relocating to rural areas in China in search of a better quality of life. This migration has led to significant changes in rural areas, particularly the decline of agriculture and the emergence of new economic activities known as rural restructuring. However, many of these areas lack proper planning institutions to guide this process, resulting in the displacement of local residents and a departure from initial rural development goals. The impact of planning institutions on rural restructuring has not been fully explored in studies of rural in-migration.

This research paper examines the historical process of rural restructuring through a comparative analysis of three rural in-migration communities in China, using the theoretical framework of historical institutionalism. Historical institutionalism emphasizes how the timing, sequencing, and path dependence of institutional development affect the current behaviour of individuals and organizations. By examining the specific historical context of each community, along with its unique institutional structure, the researchers aim to understand how different planning institutions have affected the process of rural restructuring.

The study sites, located in Dali, Yunnan Province, have all experienced a tourism boom but have produced different planning institutions and development directions due to varying social and geographical conditions. The research methodology involved interviews and analysis of secondary data from 1980 to 2022.

The researchers identified three common "Cooperative development models" which drive rural restructuring in Dali, involving collaborations between migrant-local villagers, migrants-local government, and local villagers-government. The outcome of rural restructuring can either be rural development or rural gentrification, depending on the endogenous and exogenous actors and the planning institutions they create. The early establishment of institutions which aim at neo-endogenous rural development can protect local residents from displacement in rural communities. Also, rural in-migrants screened through local conservation institutions can become co-builders of the local community. However, without strict institutional controls, the entry of capital can rapidly restructure the rural village, resulting in the displacement of long-term residents.

The research suggests that rural areas in China experiencing in-migration should establish planning institutions for neo-endogenous rural development to protect local residents from displacement. Strict institutional controls are
also needed to manage the entry of capital, and policymakers should promote cooperative development models involving collaborations between various actors in the rural community.

Citations


Key Words: Rural In-Migration, Rural Restructuring, Historical Institutionalism, Planning Institutions, Rural Development

PLANNING FOR SPATIAL JUSTICE IN SOUTH AFRICA: LESSONS FOR THE U.S.?

Abstract ID: 831
Research in Motion (RiM)

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Several U.S. states have recently considered reforms in their land-use planning and zoning systems, usually to encourage more housing construction but sometimes also to counter the racial and economic segregation that motivated many early U.S. city planners (Mogush & Worthington 2020). In this presentation, I will draw lessons for U.S. zoning reformers who seek to build more spatially just cities from the history and implementation of recent planning reforms in post-apartheid South Africa. In 1991, South Africa’s newly reconstituted Parliament rescinded the infamous Group Areas Act of 1966 and other racially based land measures. A few areas desegregated; others experienced rapid white-majority to black-majority transitions (Ballard et al. 2021). Segregation continues to predominate, however, affected only slightly by modest reforms to land-use planning over the first two decades post-apartheid (Nel 2016).

National policies first explicitly embraced spatial justice in 2011 in the National Development Plan (Van Wyk 2015); two years later, Parliament passed Act 16, the Spatial Planning and Land Use Management Act (SPLUMA), to make planning consistent with such fundamental constitutional mandates as redress, social justice, equity and inclusion, community participation and transparent decision-making (Van Wyk and Oranje 2014). Since SPLUMA applied to all local governments in the nation, subsequent policymaking focused on South Africa’s 11 largest conurbations, culminating in the Integrated Urban Development Framework (IUDF) of 2016 (COGTA 2016). The principles of the IUDF (spatial integration, inclusion and access, growth, and good governance) are meant to inform the spatial development frameworks (SDFs) adopted per SPLUMA by municipalities in these conurbations (Denoon-Stevens et al., 2022). In sum, then, South Africa has now been in transition for over three decades to a land-use planning system in which spatial justice is meant to counteract generations of apartheid planning.

This research in motion proposal will report on exploratory research about the following questions. Are South African planners attempting to ensure that their spatial development frameworks (SDFs) adhere to the principles of the IUDF on spatial integration, inclusion, and access? If so, how? If not, why not? How do planners differ in how
they define spatial integration, inclusion, and access and translate those abstract ideas to land-use policies and maps? What factors at the local level explain their progress and activity to date? When and why do they see conflicts or complementarity among principles of good governance (especially provisions for public participation and transparency), their (expert) ideas about how to define and seek spatial inclusion and access, and the imperatives of economic growth?

The interviews will begin with planning and geography academics who have kept abreast of changing developments in planning law and practice and know of case studies that could be instructive for understanding the challenges and successes to date in local SDF preparation. Based on their insights and advice, I will then connect with planners in between three and five municipalities in at least two of the country’s 11 large conurbations. To ensure that this research benefits South African scholars and practitioners, I have left the details of the exploration and the selection of cases open to the subject of greatest local interest and potential impact.

Citations


Key Words: Zoning, Spatial justice, Apartheid, Segregation

TRANSITIONING TO HIGHER ORDER DENSITY IN MID-SIZED CITIES: DEVELOPER MOTIVATIONS AND ATTITUDES TOWARDS RESIDENTIAL DENSIFICATION

Abstract ID: 903
Research in Motion (RiM)

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The promotion of compact development through densification and smart growth policy is a prevailing planning paradigm in many large cities, however, mid-sized cities have struggled to achieve a market to realize this model. Mid-sized cities (populations between 50,000-500,000), are typically characterized as being auto-dependant and dispersed with growth patterns reflective of a mix of urban sprawl and concentrated pockets of densification in downtowns and select growth nodes (Graham et al., 2019). Unlike larger cities, many residents prefer low-rise, detached housing and the sense of privacy, convenience, and additional space that some mid-sized cites offer. This may create a disincentive for the real estate market to densify outside of developed areas in the urban core as residents prefer single detached housing in the suburbs (Brewer and Grant 2015). The bulk of planning scholarship focuses on issues facing large cities, leaving a deficit of research and planning models applicable to the distinct circumstances of mid-sized cities (Bunting et al., 2007; Hartt and Hollander 2018).

This presentation draws on research in progress from a pan-Canadian survey of builders and developers working in five mid-sized cities characterized by low densities and high demand for housing. The overarching research objective was to better understand the key drivers and attributes of residential densification in Canadian mid-sized
cities. Survey respondents were asked a series of questions related to barriers and opportunities to realizing higher order residential densification: regulatory, policy, financial, market, labour, consumer, and political. They were also asked about the role of municipalities in facilitating development. The presentation will showcase preliminary findings and speak to gaps between smart growth planning policy and market realities, achieving compact and dense city qualities, and the risks and rewards for the development industry.

The benefits of densification from a planning perspective are well established, but less is known about what property developers make of them. Research on the Canadian development industry in particular shows that little is known about the identity and motivations of developers who build housing, their attitudes and preferences, and their interpretation of planning policy in the mid-size city context (Harris & Rose 2020). By providing a developer perspective, the research aims to nuance understanding of the applicability of intensification growth models in mid-size cities and contribute applicable strategies and policy approaches to planning practice.

Citations


Key Words: compact development, smart growth, developers, densification, land use planning

A PLAN INTEGRATION FOR RESILIENCE SCORECARD™ FOR WILDFIRE HAZARDS FOCUSED ON THE WILDLAND-URBAN INTERFACE (WUI)

Abstract ID: 945
Research in Motion (RiM)

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Wildfire is among the most destructive natural hazards affecting communities in North America, and particularly in the western United States. Climate change is exacerbating the problem, creating conditions that favor increased frequency and severity of burns, while continued urbanization and prevailing development patterns increase the population and extent of the built environment in the wildland-urban interface (WUI). Though wildfire risk is growing in many regions, the issue is currently most pronounced in California; between 2003 and 2021, the ten costliest wildland fires in the U.S all occurred in that state, and one in four Californians lives in an area considered high-risk for wildfires. The real and growing threat of wildfire, particularly in the WUI, necessitates effective mitigation- and resilience-oriented community planning.

At the same time, communities are increasingly producing many different types of plans to guide their land use and development decisions. In California, a typical jurisdiction’s network of plans includes a General (Comprehensive) Plan, a Hazard Mitigation Plan, a Community Wildfire Protection Plan, and potentially many
additional sectoral or small area plans. While the local planning department may lead development of some plans, others are produced by various “siloued” agencies and groups within and outside government, and integration is often lacking. This is especially true with regard to hazards, and in particular fire hazards in the WUI which, in California, are addressed by several agencies and plans but without sufficient collaboration, integration, or spatial understanding.

To address this dilemma, we are applying the Plan Integration for Resilience Scorecard™ (PIRS) method in partnership with several California jurisdictions that are subject to wildfire hazards. Originally developed with a focus on flooding, the PIRS™ method enables the spatial evaluation of a community’s network of plans to strengthen resilience and reduce vulnerability to hazards. The process aims to harmonize a community’s network of plans by systematically assessing policies and facilitating their adjustment to improve the focus and coordination of plans on building resilience in the most vulnerable locations.

Preliminary results indicated that the PIRS™ method is generalizable to wildfire hazards with small methodological and contextual modifications. Wildland fire in the WUI presents a special challenge, however, in that the hazard itself stems from the dynamics of fuel variables (natural and built) interacting with climate and human variables. Added complexities notwithstanding, the development and application of a wildfire-hazard-focused PIRS™ supported by a spatial framework enables an understanding of the heterogeneous effects of policy across a community, including the identification of policies that support resilience and those that conflict with a risk reduction strategy.

The multidisciplinary project team is composed of faculty and affiliates from the California Polytechnic State University, San Luis Obispo WUI Fire Institute and the Texas A&M University Hazard Reduction and Recovery Center. The two-year project, supported by the Gordon and Betty Moore Foundation, involves collaboration with four California communities to develop and test the new PIRS™ for Wildfire methodology.

Citations


Key Words: Wildfire, Wildland-urban interface, Plan integration, Spatial plan evaluation, California

A MIXED CITY OR AN ANCIENT HISTORICAL CITY?: THE MALLEABLE PLACE OF CULTURAL HERITAGE SITES IN LYDD’S DISCOURSE Identity

Abstract ID: 1140
Research in Motion (RiM)

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Israel has an official “mixed city” classification, a label that denotes a municipality as having a “significant” Palestinian minority population amongst a “decisive” Jewish majority. With great detail, planning and urban
studies scholars looking at “mixed cities” in Israel have outlined how planning mechanisms intentionally facilitate division between Jewish Israelis and Palestinians with Israeli citizenship. However, in an emphasis on division, there has been a dismissal of the “mixed” in the “mixed city.” This paper recenters this question of the “mixed city” and its conceptualization through analyzing how the municipality of one mixed city, Lod (henceforth referred to by the Arabic name Lydd), uses cultural heritage sites to strategically subsume this official classification while constructing a new discursive identity for Lydd—that of the “Ancient Historical City.”

This exploration into how municipal urban development and rhetoric construct a new discursive identity for Lydd emerges against the backdrop of the opening of the Shelby White and Leon Levy Lod Mosaic Archaeological Center, which houses a third century Roman mosaic, and its glaring contrast to nearby Ottoman ruins that have been haphazardly cordoned off and left to exist without any caretaking by the state or municipality. In alignment with David Harvey and his view of heritage as a process situated in its respective political and social context, this exploration into Lydd’s heritage management as it relates to a mixed city identity asks whether such a present classification is being fostered and upheld through heritage management processes, or whether the classification has had little bearing on heritage discourse in Lydd (Harvey, 2001, p. 335). Through discourse analysis of the Lydd municipal website’s mentions of heritage sites, municipal urban renewal documents, public presentations about said renewal plans, and the Shelby White and Leon Levy Lod Mosaic Archaeological Museum’s website, what I ultimately find is how heritage functions as a vehicle to construct and deploy Lydd’s discursive identity as an “ancient historical city,” relegating its official classification as a “mixed city” to secondary importance—despite how the variety of heritage sites in Lydd offer the opportunity to exaggerate a mixed identity for the city and cloak the division between Jewish Israeli and Palestinian residents.

On the one hand, the heritage management practices, including heritage site treatment in urban renewal plans, can be read as easily aligning with the overarching discourse of mixed cities, namely as manifestations of division and inequity upholding Jewish ethnonational supremacy and reaffirming the second-class status of Palestinian citizens. As Oren Yiftachel and Haim Yacobi explain, socio-spatial division permeates Lydd and facilitates an urban ethnocratic regime (Yiftachel & Yacobi, 2003). Such an understanding aligns with the vast scholarship that has linked heritage management to affirming, constructing, and realizing the nation, as well as curating and crafting national narratives (Abu el-Haj, 2001; Said, 2000, p. 179). However, while understanding the uneven conservation and preservation of heritage sites as related to materializing ethnonational identity and supremacy may not be inaccurate, such a reading foregoes attention to the municipal strategy in intentionally deploying and subduing the “mixed city” label.

Citations


Key Words: Heritage, Urban Renewal, Preservation, Municipal Branding, Middle East

ACCOUNTING FOR VARIED LAND TENURE ARRANGEMENTS IN CLIMATE ADAPTATION
Abstract ID: 1316
Research in Motion (RiM)

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Planners confront varied land tenure arrangements when they discuss, help design and implement climate adaptation initiatives. Most initiatives, however, fail to account for multiple tenure arrangements, which make it difficult or impossible for many residents to participate. Many programs privilege formal land ownership, and the primary participants or beneficiaries are titled property owners regardless of whether they live or work the land. Some programs may recognize renters, but few recognize the varied and complex ways that people may own or occupy land including land leases, non-traditional shelter, or heirs’ property, a form of ownership common among those who inherit land informally.

Research has shown how heirs’ property owners are subject to laws and policies that threaten housing security and erode wealth and face obstacles that make it difficult or impossible to access disaster recovery aid (Baab 2011; Mitchell 2000; Way and Goldstein 2022). In this paper, we draw on two research projects to detail the ways that heirs’ property and other alternative land tenure arrangements influence people’s participation in climate adaptation planning. The first project, based on interviews with residents in coastal Louisiana, explores residents’ relationship with the land in high-risk areas and examines the multiple factors that influence their interest and ability to participate in state and federally funded mitigation and relocation initiatives (Nelson, Ehrenfeucht, Birch & Brand 2022). The second project is based on interviews, case study material and observations of the federal response to the Calf Canyon Hermits Peak fire complex in New Mexico. Because the fire was started by the US Forest Service, the affected counties received an additional allocation outside the Stafford Act intended to assist home and business owners recover, including heirs’ property owners and those whose informal businesses and livelihoods are tied to the impacted land. The process by which this is occurring is unfolding in spring 2023.

This topic is critical to planning practice because heirs’ property and other alternative tenure arrangements are prevalent in communities throughout the United States, from communities in the rural South to older, low-wealth urban neighborhoods to tribal lands. Accounting for these forms of ownership and land arrangements will be necessary to ensure that climate action does not perpetuate or exacerbate racial and economic injustices. This research contributes to planning scholarship by examining how the range of alternative tenure and informal activities interact with federal, state, and regional adaptation policies and explores opportunities for more just and equitable climate action.

Citations


Key Words: climate adaptation, heirs' property, climate action, disaster recovery

MUNICIPAL COMPREHENSIVE PLANS AND INDIGENOUS SOVEREIGNTY IN ALASKA
Abstract ID: 1337
Research in Motion (RiM)
Comprehensive plans are both a process and a product that identify a community's vision, goals, and strategies and provide direction for capital improvements and land use. These documents set municipal budgets, allocate staffing and resources, and renew or establish zoning for privately owned parcels. Yet, planning tools can also uphold the structures of inequality and the financial interests of the dominant class (Simpson et al., 2020). In the U.S., states delegate planning authority to local governments. On reservations, tribal governments as sovereign nations have planning authority for their land. How does this authority tension play out off-reservation in communities with municipal and tribal governments and land? Furthermore, how can this inform a more equitable approach to planning and respect for sovereignty in urban areas, where most American Indian and Alaska Native people live?

In this paper, I analyze three comprehensive plans in Alaska communities where both a tribal and municipal government are present. Planning documents provide an “unexpected archive” of the colonial past and present (O’Brien, 2017). My choice to look at the rhetoric of the institution allows an understanding of how institutions uphold racist and capitalist modes of oppression (Marquez, 2021).

In my research, I analyze the treatment of Indigenous sovereignty in non-tribal comprehensive planning documents to understand the limits of urban planning in a settler colonial state. I build on more quantitative approaches to plan analyses (Mui et al., 2021) and conduct a qualitative content analysis of the following components of each comprehensive plan:
- Executive summary
- Community vision, values, and principles, and goals
- Rhetoric around sovereignty
- Rhetoric around property and land ownership
- History in the “background section”
- How stewardship and caretaking is addressed
- Land use plan map
- Land use strategies
- Documentation of collaboration and communication with tribal governments and organizations

This research responds to Heather Dorries (Anishinaabe) call for planning without property that centers belonging and being in relationship over private property control (Dorries, 2022). As a non-Indigenous scholar with ten years of experience as a planner in the settler colonial state of Alaska, I intend to provide guidance for the profession to respect and uphold Indigenous sovereignty in one of the core areas of planning practice, the comprehensive plan. I hope to support planners in identifying how their work can be both insurgent and supportive of existing power structures. Planners will come away with concrete advice for going beyond land acknowledgments and “tribal consultation” in planning work. This work could potentially support the APA tribal and Indigenous division to develop a PAS memo to support Indigenous sovereignty.

Citations

A STUDY ON THE ESTABLISHMENT OF TRAFFIC ZONE AND THE CHANGE OF TRAFFIC PATTERN IN SEOUL METROPOLITAN AREA

Abstract ID: 410
Poster

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Seoul, the capital of Korea, has grown in the city since 1980 due to the concentration of population and industry, but urban problems such as housing shortage, job imbalance, and traffic congestion have occurred due to excessive concentration. To solve this problem, various policies such as the construction of a new city were implemented, but due to a lack of self-sufficiency, phenomena such as job placement imbalance and increased travel time appeared. Nevertheless, policies have been implemented to solve urban problems, but wide-area urban problems are intensifying.

With the suburbanization of residential areas and industries, new centers were formed, and traffic occurred in the process of connecting them. Changes in traffic are sensitive to changes in the spatial distribution of cities. Therefore, it can be said that changes in the spatial structure of the city and the passage of the city are important factors in the mutual relationship.

The right of passage formed in Seoul and the surrounding area is constantly changing and has a mutual relationship. As cities in which relations between cities appear become talkative and occur, metropolitan areas are formed, which is called the Seoul metropolitan area.

Changes in urban spatial structure can be explained by various theories such as Urban realms (Vance, 1977), suburban downtown (Hartshorne & Muller, 1989) and edge city (Gareau, 1998).

Recently, as the importance of functional links between cities in multi-nuclear spatial structures has expanded, it is also called a network city that explains urban systems based on Network Analysis.

In terms of network cities, functional links between cities can be confirmed using traffic data. The relationship between each other can be grasped through functional relationships, and it can be used as basic data to confirm the spatial structure of the city through change.

However, it is not clear how to analyze the establishment of the right to pass to solve urban problems and grasp the flow of traffic. Therefore, we would like to derive a functional connection between cities using traffic data, and use this to present an analysis method for the establishment of the right to pass.
Residential areas are formed around the employment center where employment is concentrated, and the right to pass between the employment center and the residential area appears. Therefore, this study can be largely divided into the derivation of an employment center and the establishment of a right to pass, and spatial traffic patterns were examined based on the derived right to pass.

First, hotspot analysis was used as a method of setting the center. The analysis was conducted by calculating the distance at which spatial autocorrelation was maximized in the spatially concentrated employment center.

Second, the Mean First Passage Time (MFPT) was calculated using traffic data from the city to the employment center. This analysis method used the Markov-chain model as a method of measuring the functional linkage between cities. After that, the right of passage was established through Clustering analysis.

Finally, the DO Matrix was built using the derived traffic rights, and the hierarchy and traffic patterns between traffic rights in the Seoul metropolitan area were examined through Factor analysis.

Through this, a method of setting the right to pass in the Seoul metropolitan area was proposed, and the pattern was examined using the right to pass. Regional establishment to understand traffic occurring in the metropolitan area and the relationship between them is an important factor. Therefore, it is believed that by establishing the right of passage based on functional linkage, it can help to prepare policies in the metropolitan area through solving urban problems in the metropolitan area and analyzing traffic patterns.

Citations


Key Words: Fuctional network, Metropolitan, Markov-chain, Mean First Passage Time, Commuting

METROPOLITAN-LEVEL MANAGEMENT FOR BALANCED GROWTH AND SUSTAINABILITY IN SOUTH KOREA: FACTORS INFLUENCING POPULATION MOVEMENT WITHIN METROPOLITAN AREAS

Abstract ID: 463
Poster

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Based on recent data on population growth in South Korea, more than half of the total population lives in the Seoul metropolitan area, which only covers 12% of the country's land, leading to a growing imbalance. The nation is also facing critical challenges such as low birth rates and an aging population, which could potentially cause local cities to disappear due to severe imbalances. Furthermore, the central cities of all five of Korea's metropolitan areas, including Seoul, are experiencing a continued decline. As some researchers have pointed out, the growth of
metropolitan areas is a crucial factor in achieving balanced national and regional development. Therefore, the decline of the central city can have adverse effects on the sustainability of the metropolitan area, leading to further imbalances in the country's growth. Accordingly, efforts have been made to determine the cause of the decline in the central city of the metropolitan area, and research suggests that a significant portion of this decline is attributed to the outflow of population resulting from the development of new towns in suburban areas. In Korea, the lack of metropolitan-level boundaries in urban management implies that permission for development at the single city level induces this phenomenon. This study highlights the need for the introduction of metropolitan-level management to achieve balanced growth and sustainability in Korea, with a particular emphasis on internal movement within the metropolitan areas. To identify factors contributing to the outflow of population from central cities, several researchers have explored push and pull factors influencing population movement between central cities and suburban areas in metropolitan regions. This study aims to identify and synthesize the factors influencing internal population movement within the metropolitan area, with a specific focus on the factors contributing to the outflow of population from central cities. The research process includes the following steps: First, population movement microdata for metropolitan areas in Korea is used to identify the current status of population movement between central cities and suburban areas to demonstrate whether the decline of the central city is due to population absorption in suburban areas. Secondly, a regression model is established with the net population that has moved from the central city to the suburbs as the dependent variable to derive the factors of population absorption in the suburbs of each metropolitan area. The method of analysis used a regression model with panel data. The analysis results show that, consistent with previous studies, the new town development variable has a significant positive effect on the population outflow from central cities in all metropolitan areas. Additionally, the location characteristics of suburban areas and the industrial characteristics of individual metropolitan areas have a notable impact. The analysis indicates that the development of new town in suburban regions significantly contributes to the decline of central cities. To address this issue, the introduction of growth management at the metropolitan level is necessary. Furthermore, to ensure sustainable growth of the country, it is essential to introduce urban policies in central cities that consider the factors of population outflow and prevent further decline.

Citations


Key Words: sustainable growth, balanced growth, urban management, metropolitan area, panel regression

SPOTTY ACCESS..TO WATER? PRECARIOUS LAND USE POLICIES IMPACTING WATER ACCESSIBILITY IN TEXAS
Abstract ID: 925
Poster

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This research aims to understand salient factors that have led to the inaccessibility of water in Texas in reference to the areas within the extraterritorial jurisdiction. The extraterritorial jurisdiction (ETJ) is an “unincorporated area that is contiguous to the corporate boundaries” of a city. TEX. LOC. GOV’T CODE § 42.021. The ETJ, a concept created by the Texas Legislature in 1963, is said to be established in order “to promote and protect the general health, safety, and welfare of persons residing in and adjacent to” cities, a sort of buffer zone outside of a city’s corporate limits. Id. § 42.001 (Texas Municipal Leagues, 2019). Although much research has been done regarding colonias, or informal settlements, on the Texas southern border, analyzing service boundaries for the state allows for a larger understanding of the impact ETJs have on water access.

Aiken (1987) coined the term “municipal underbounding” as a way to describe an increase in regional segregation in Mississippi. Approximately 20% of Yazoo Delta African Americans lived within one mile of corporate limits without basic services such as water and sewer lines. Throughout various pieces of literature, this phenomenon has also been known as infrastructure redlining, under-serviced areas, or geographies of gentrification (see Balazs, 2011; Gordon, 2019; Nieberg, 2019). Gordon (2019) considers “municipal incorporation and annexation” as “powerful mechanisms of segregation or exclusion” (p 21). When considering the geography of metropolitan St. Louis, sharp distinctions exist between municipalities in St. Louis County and unincorporated areas where there is a lack of basic services such as water (Gordon, p 51). Many small case studies have been conducted on health and racial inequities regarding municipal underbounding in the United States (Lewis, 2009; Anderson, 2010; Heaney et al., 2013; MacDonald Gibson, et al., 2014; Schindler, 2015). Litcher et. al (2007) produced one of the first systematic multivariate analyses that showed that large Black populations on an urban-fringe were less likely to be annexed due to being perceived as a “threat” (p 2007).

With a focus on the consequences of municipal decision-making for those living in the extraterritorial jurisdiction (ETJ), an analysis has been done that answers the question: In a highly decentralized water service system, what factors are salient in access to municipal services such as water in Texas? Past studies have focused on race and ethnicity as the main drivers for access to water in the ETJ; however, municipal health (as bond ratings) will be considered in this model to capture the interactions between the urban political economy and race to determine predicted access to water. Using a LASSO regression (Least Absolute Shrinkage and Selection Operator), a supervised regularization method used in machine learning, preliminary results showed that the single variable of Hispanic explained 72% of the variation within the training dataset. The main regressand to the model was based on the U.S Census question “Do you have complete access to plumbing in your household?” This means that the main predictor for the lack of water in the household in Texas was Hispanic.

Citations

- Balazs, Carolina, -Frosch Rachel Morello, Alan Hubbard, and Isha Ray. “Social Disparities in Nitrate-Contaminated Drinking Water in California’s San Joaquin Valley.” Environmental Health Perspectives 119, no. 9 (September 2011): 1272–78. https://doi.org/10.1289/ehp.1002878.

Key Words: Water Access, Machine Learning, Service-Boundaries, Texas, Land-use policy
HARM REDUCTION, ZONING, AND NIMBYS -- CONFLICTS BETWEEN STATE AND LOCAL GOVERNMENTS IN ESTABLISHING NEEDLE EXCHANGE PROGRAMS

Abstract ID: 1221
Poster

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With the passing of S3009/A4847 (The Syringe Access Bill) in New Jersey in early 2022, the state moved to expand access to needle exchange programs in response to high drug use and disease transmission rates. This was hailed as a victory by advocates of harm reduction strategies to curb disease spread and improve population health. However, local governments in New Jersey and throughout the country have turned to zoning and land-use regulation to limit the ability of harm reduction and needle exchange programs to operate in their jurisdictions, contradicting state and national level support for such programs. This poster seeks to plot the different ways these conflicts play out throughout the country as local zoning officials and municipalities move to outlaw or limit the capacity of harm reduction programs to operate within their boundaries, and test to see how these conflicts relate to localized rates of intravenous drug use and disease spread both before and after the conflict point. Furthermore, I will examine the community profile for municipalities that choose to resist harm reduction programs, and explore the various zoning regulations used to that end.

The goal of this poster is two-fold. First it will provide an updated account of an on-going legal battle over land-use regulation pitting local governments against state governments throughout the country. Second, this poster will explore the local characteristics that may fuel such disagreements in order to perhaps predict where similar conflicts may arise. Additionally, there may be valuable lessons to be learned from both on-going and resolved conflicts.

The relevance of this topic is to bring together the threads of law, public health, and planning to explore how the regulations of our urban environments can impact the health outcomes of individuals and populations alike. As such, this research will draw from public health, legal, and urban planning literature, as well as contemporary journalism. It is also relevant to the conference Focal Theme of Planning for Inclusion in Divided Places and Societies.

Citations


Key Words: zoning, public health, land-use regulation, planning
Track 9 – Food Systems, Community Health & Safety

URBAN PLANNING AND HEALTH EQUITY: INNOVATIONS IN RESEARCH, TEACHING & PRACTICE
Abstract ID: 287
Roundtable

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Urban Health Equity is a key challenge for planners, as they engage in such local and global issues as climate change, entrenched segregation, and environmental injustices. This panel will discuss innovations from planning scholars working around the world on issues of public health, policy and social justice. We will discuss innovations in research, such as citizen science and community-based participatory action research, that might improve the evidence base behind urban health equity interventions while supporting more invisible groups and voices and securing their agency and organizing capacity. We will discuss persistent and emerging urban health equity issues, from racial residential segregation, urban informality, COVID-19, climate protection and resilience, and ways academic, community and government partnerships are aiming to address these issues in an intersectional manner. The panel will also share innovations in urban health equity pedagogy, as scholars explore such tools as studios, new technologies and community-member-led courses. The intended audience is students and scholars in any planning field/discipline interested in health and social justice.

Citations

Public safety has been one of the primary objectives of community planning and design for many decades. Nevertheless, a "defensible space (Newman, 1972)" can be exclusive, whereas a good community/public space should be inclusive. The term "crime prevention through environmental design" (CPTED), coined by Jeffery (1977), has drawn a great deal of attention from a variety of disciplines, including criminology and planning, due to its anticipated roles in community crime prevention and strengthened neighborhood ties. Scholars have attempted to conceptualize particular CPTED components and guiding principles (e.g., Crowe, 2000), as well as to experimentally test its efficacy in reducing crime and violence (e.g., Ceccato & Tcacencu, 2018). Despite the growing evidence, not everyone perceives that CPTED is an effective strategy for lowering crime or fear. Given that community members who think CPTED works will ultimately decide on policy efforts to implement it, this is no small matter. We use data from a sample of 1,138 South Korean residents to examine the variables from instrumental and expressive models (Jackson & Sunshine, 2007) and to explain why some community members are more likely to view CPTED as effective in lowering crime and fear of crime. Our results from regression models showed that those who perceived more informal social control and social cohesion in their communities were more likely to perceive higher levels of effectiveness of CPTED programs in reducing crime and fear of crime. Interestingly, those who exhibited higher levels of fear of crime and safety concerns around schools were less likely to see the benefits of CPTED programs. These findings may prompt a meaningful discussion on how to plan and design community/public space that is both safe and welcoming.

Citations


Key Words: Defensible Space, CPTED, Instrumental Model, Expressive Model, Fear of Crime
LOCATING A GROCERY STORE IN AN URBAN AREA LACKING ACCESS TO FRESH AND HEALTHY FOODS: IS IT AS SIMPLE AS IT SEEMS?

Abstract ID: 89
Individual Paper

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Central Research Theme: What is the best solution for an urban area that lacks an outlet for fresh and healthy produce? Put one there! Research often talks about the effects of placing fresh produce options in existing stores or locating corner stores in such areas void of fresh produce options from the supplier’s viewpoint: how successful was it and is it sustainable. There is a lack of understanding the issues from the residents’ perspective. This study goes to the residents who visit the store and who do not, to understand the issues to a relatively simple and effective solution for an area lacking in this basic necessity. We did a study on a newly opened grocery store in an urban area in Lansing, Michigan to assess what consumers find useful/beneficial to having this store locate in their area, and what current residents who do not shop at that store perceive to be the issues preventing them from doing so.

Methodology: This study used primary data collected through surveys and interviews from residents to shopped at the newly opened store and from those who live in the area yet do not go to shop at the store. In-store surveys were conducted for the former target participants by the researchers themselves, while online interviews conducted by them via zoom were used for the latter section of participants.

Findings: Preliminary results from the in-store shoppers indicate they primarily shopped at the new store because of its location and ease of access (78% of respondents), they shopped more frequently from this new location (57% of respondents), that they bought healthier foods when they shopped at the new location (79% of respondents), and they rated the store highly on the quality of the products offered while less so on the price and variety of the products. Barriers to shopping at the store from the interviews point primarily to affordability, variety and perceptions of “not feeling welcome”. The study points to an emerging need for planners to understand the nuances and perceptions of residents, who are supposed to be the main beneficiaries of locating a grocery store in such an area (devoid of fresh and healthy produce), especially where equity and inclusivity are concerned.

Relevance to planning scholarship: Research on access to food has recognized the disproportionate burden residents of areas devoid of fresh foods face in efforts to lead a healthy lifestyle. We often talk about the critical need for inclusivity in planning efforts to help residents with overall health and wellbeing. Within this context, creative ways in which cities can get residents access to fresh and healthy foods is applauded and celebrated when they locate a grocery store in an area previously lacking any such options for its residents. However, planners are perplexed when such overwhelming results are not realized and suppliers and planners alike are eager to understand the nuances of what they might have missed and what might be barriers to more residents shopping at these newly located stores. Our results show that attention to details, as opposed to broad-based policy solutions, such as pricing equity and community outreach are equally important to achieve success as merely locating a store in a place where there wasn’t one for a long time.

Citations

- Nicolas Larchet 2014. Learning from the Corner Store, Food, Culture & Society, 17:3, 395-416, DOI: 10.2752/175174414X13948130848386

Key Words: Access to Food, Grocery stores, Urban areas

BEYOND THE DRIVER’S SEAT: AN ANALYSIS OF WALKING AND PUBLIC TRANSPORTATION ROUTES IN ELLIOT LAKE
Abstract ID: 116
Individual Paper
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Canada’s population is aging rapidly. Yet, pervasive mobility inequalities continue to undermine the wellbeing of older adults. Despite the World Health Organization recognizing public transportation as an essential element of age-friendly communities, the majority of older Canadians drive a private vehicle as their primary form of transportation. The reliance on private vehicles can be partially explained by the lack of age-friendly public transportation, or at times the complete absence of public transportation, in smaller cities and rural communities. This is of particular concern, since rural and remote communities have a higher proportion of older adults and are experiencing aging at a more rapid rate than urban and suburban spaces. Additionally, many of the same communities face unique obstacles, such as shrinking populations, declining economic bases, lack of capital, and lack of density or infrastructure to support their aging population.

Elliot Lake in Northern Ontario, Canada is facing the interrelated impacts of aging and decline. It is Canada’s most severely shrinking city and is home to the nation’s second oldest population. After the loss of the uranium mining industry, Elliot Lake rebranded itself as a retirement community to meet the needs of its older population. In 2017, the city published a five-year Age-Friendly Action Plan to improve Elliot Lake in eight domains, including health care and transportation. Both domains are interconnected; for older adults who are unable to drive, barrier-free public transportation to health care facilities is crucial in ensuring they have the ability to access health care appointments. Elliot Lake already has a public transit service, making it well positioned to provide age-friendly transportation services and to set a precedent for rural transit. However, with Elliot Lake having a shrinking tax base and a population of only 11,372 with almost 40% being over the age of 65, it begs the question of whether older adults have adequate access to the community-based health care services needed to age-in-place?

Using the novel Older Persons Walking and Transit Audit (OPWATA), we evaluated the accessibility of health care facilities in Elliot Lake. We found that the city’s topography and an inconsistent use of age-friendly features along walking routes and at bus stops discourage older adult public transportation use and create barriers to health care access. We outlined the geography of health care facilities in Elliot Lake and determined that 27 of 28 physician offices in the community are located in two health care facilities. Through a buffer analysis, we demonstrated that 76% of older adults live within 150 metres of a bus stop, while 96% of older adults live within 400 metres of a bus stop. In other words, most older adults in Elliot Lake live at a reasonable distance from a bus stop, and nearly all older adults live within the distance from a bus stop suggested in transportation planning literature. Finally, we developed municipal-level recommendations to improve health care access in Elliot Lake and considerations for small cities and rural communities wishing to instate or improve public transportation services. This includes the creation of a universal age-friendly bus stop design, along with a universal design of pedestrian paths near bus stops, to further encourage active transportation and public transportation use.

Citations


Key Words: Aging, Age-Friendly Communities, Public Transportation, Older Adults

FOOD ACCESS AFTER DISASTERS: A MULTI-DIMENSIONAL VIEW OF RESTORATION AFTER HURRICANE HARVEY
Abstract ID: 193
Individual Paper

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Access to critical services, such as food, after disasters are planning problems that affect millions of people each year. At their intersection, understanding how disasters disrupt and alter the operations of food suppliers provides insights into changes in access throughout the recovery process. This research explores the results from a survey of food retailers after Hurricane Harvey to understand changes in access in three Texas counties, Harris, Jefferson, and Orange. Similar to criticisms of food desert literature, we find that a focus only on accessibility of retailers (i.e. store location and closure) over simplifies and obscures the complexity of food systems. Specifically, restoration models based on store closure underestimate the number of days residents are without food by nearly two weeks; when models include more dimensions of access, such as accommodation (i.e. store hours) and availability (i.e. fresh food inventory), the results more accurately reflect impacts to food access. The role of damage to property and critical infrastructure were also distinct: while significant for accessibility, they were less significant for accommodation and availability. Our findings support the need to expand models of access to include people, store type, and supply chains; across multiple dimensions.

Practicing planners aspire to ensure equitable access to resources (e.g. food, education, and health care). Planners should consider: (a) that a focus on accessibility (e.g. food deserts) may underestimate inequality and that the inclusion of multiple dimensions of access may provide a more accurate picture; (b) expanding hazard mitigation plans to include critical infrastructure impacts; employee availability; and the businesses that supply food retailers; (c) ways to fill gaps in access through non-profits and volunteer organizations.

Citations

Key Words: Food access, disasters, critical infrastructure, equity, food desert

MOBILITY-BASED TREE CANOPY EXPOSURE AND CARDIOVASCULAR HEALTH: INSIGHTS FROM MOBILE PHONE LOCATION DATA
Abstract ID: 243
Individual Paper

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The relationship between green exposure and cardiovascular health has been increasingly documented, with studies showing that access to green spaces can have a positive impact on cardiovascular health. However, current research mainly focuses on measuring the tree canopy in people’s home neighborhoods to represent their green exposure, ignoring the potential impact of exposure resulting from their mobility activities.

To address this gap, we use millions of mobile phone location data in twenty most populated metropolitan areas in the United States, enabling tracking of tree canopy exposure not only in home neighborhoods but also in destination neighborhoods. A weight matrix is used to represent the mobility connection intensity between neighborhoods. We use census-tract-level data on two cardiovascular health outcomes from Centers for Disease Control and Prevention 500 Cities Dataset. We also use tree canopy, socioeconomic factors, and built environment as control variables. We seek to answer three questions: (1) Does tree canopy exposure affect cardiovascular diseases? (2) Does the difference of exposure between destination and home neighborhoods have an impact on the cardiovascular diseases? (3) How does weekday and weekend tree canopy exposure differ in their relationship to cardiovascular diseases?

We found that a larger difference in canopy exposure between destination neighborhoods and home neighborhoods, particularly during weekends, is positively correlated with better cardiovascular health outcomes. Overall, the study provides new insights into the relationship between green exposure and cardiovascular health, which can inform urban planning and forestry initiatives aimed at promoting cardiovascular health.

Citations


Key Words: green exposure, cardiovascular health, mobility, environmental planning

TAKE-OUT FOOD CONSUMPTION AND OVERWEIGHT, OBESITY AND SUBJECTIVE WELLBEING OF URBAN ADULTS IN CHINA
Abstract ID: 251
Individual Paper

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In recent years, the popularity of take-out food has grown rapidly among urban residents in China and globally. The COVID-19 pandemic has further fueled this trend, along with the ease of online ordering and delivery. Fastdata, a third-party data consulting platform, has reported that China's online take-out food industry experienced significant growth in recent years. The market size for this industry reached 653.6 billion yuan, equivalent to approximately 102 billion US dollars, in 2019. The market size continued to grow and reached 835.2 billion yuan, approximately 130.79 billion US dollars, in 2020, with 17.12 billion orders placed. According to Meituan, the largest online to offline take-out food delivery platform in China, there were approximately 460 million take-out consumers in China by the end of 2019, which accounted for 50.7% of the country's 900 million internet users and 53.9% of the urban resident population. These statistics indicate that online-ordered take-out food consumption has significantly impacted the dietary behaviors of Chinese urban residents.

Despite this, few studies have examined the relationship between take-out food consumption, food environment, overweight and obesity, and individuals' subjective well-being. To fill this research gap, this study develops a conceptual framework integrating the social-ecological model, theory of planned behaviour, and model of community nutrition environment.

Using a cross-sectional research design, over 700 survey respondents were recruited from Shanghai and Suzhou between March and September 2022. The questionnaires collected information on participants' dietary behaviours of take-out food, Body Mass Index (BMI), Personal Well-being Index (PWI), and perceived neighbourhood food environment. Multiple linear regression and Structural Equation Models were applied in statistical analysis to investigate the associations between take-out food consumption, overweight and obesity, and well-being.

Preliminary findings show that urban adults who consume take-out food more frequently are more likely to experience overweight and obesity. Furthermore, those who order western-style fast food take-outs are at a higher risk of obesity than those who order fruits and vegetables. In addition, a perceived neighbourhood food environment with high accessibility to different types of food stores could have a negative impact on take-out food consumption behavior.

This study has several implications, including the development of a valid and reliable scale to measure emerging dietary behavior such as online-ordered take-out consumption. It highlights concerns regarding the planning and design of neighborhood food environments within the context of 15-minute life cycle planning. Additionally, it emphasizes health inequities related to dietary behaviors and underscores the need for public health interventions to reduce the risk of overweight and obesity.

Citations


Key Words: Take-out food consumption, Overweight, Obesity, Subjective wellbeing, Neighborhood food environment
EFFECTS OF EXPOSURE TO EDUCATIONAL FACILITIES IN 15-MINUTE WALKABLE NEIGHBORHOODS ON COGNITIVE HEALTH INEQUITIES IN OLDER ADULTS
Abstract ID: 255
Individual Paper

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Background: While there is broad consensus on the protective role of education on cognitive function, the effects of older adults' exposure to educational facilities on their cognitive health and cognitive health inequalities need further investigation. We hypothesized that older adults' greater exposure to educational facilities in their 15-minute walkable neighborhoods would be associated with a lower risk of cognitive impairment, since exposure to such facilities provides older adults with opportunities for cognitive activities. And we postulated that early life education-related inequalities in cognitive health would be less pronounced in older adults with greater exposure to educational facilities in their later life.

Methods: Fine-scale built environment data were used to portray the 15-minute walkable neighborhood of 7020 residents aged over 50 living in three urban communities in Shanghai and Wuhan, China. They were categorized into groups based on education-deprivation in their early life and exposure to educational facilities in their later life. Each older adult was defined as cognitively normal or cognitively impaired after systematic neuropsychological examinations conducted by neurologists and psychometrists. Logistic regression models were employed to estimate the odds ratios of cognitive impairment for exposure to different educational facilities, controlling for confounders such as sociodemographics and comorbidities. Subsequently, whether the association between education-deprivation quartile and cognitive impairment varied by exposure to educational facilities was explored, by including interaction terms for education-deprivation and exposure to educational facilities in the models. The essence of significant interactions was then interpreted in a series of models stratified by group of exposure to educational facilities.

Findings: Living in the 15-minute walkable neighborhood with more university campuses, senior colleges, kindergartens and primary schools was beneficial to cognitive health in older adults. Compared to the group exposed to the highest proportion of university campus land, other groups were more likely to be cognitively impaired (OR=1.51, 95% CI 1.16-1.97, p=0.002; OR=1.91, 95% CI 1.45-2.52, p<0.001; OR=2.23, 95% CI 1.67-3.00, p<0.001; OR=1.78, 95% CI 1.27-2.50, p=0.001). Compared to the group exposed to senior colleges, the group without exposure to senior colleges within a 15-minute walk had a higher risk of cognitive impairment (OR=1.22, 95% CI 1.04-1.42, p=0.014). Compared to the group exposed to the most kindergartens and primary schools, other groups were more likely to be cognitively impaired (OR=1.13, 95% CI 0.91-1.40, p=0.267; OR=1.35, 95% CI 1.07-1.69, p=0.010; OR=1.37, 95% CI 1.04-1.81, p=0.028).

The association between education-deprivation and cognitive impairment differed significantly across the groups of exposure to university campuses (p<0.003), whereas it did not differ significantly across the groups of exposure to senior colleges (p=0.162), and the groups of exposure to kindergartens and primary schools (p=0.188).

Education-related inequalities in cognitive health were lower in older adults living in the 15-minute walkable neighborhoods with the highest proportion of university campus land. The most education deprived quartile was 4.09 times (95% CI 2.92-5.72, p<0.001) more likely to be cognitively impaired than the least education deprived quartile in the group with the least exposure to university campus, while this difference narrowed to 2.57 times (95% CI 1.46-4.52, p=0.001) in the group with the greatest exposure to university campus.

Implications: For a livable city supporting healthy aging, the 15-minute neighborhood planning guidelines should
highlight the provision of educational facilities. To protect older adults’ cognitive health and reduce their cognitive health inequalities related to education-deprivation, university campuses should be encouraged to be located within a geographic range of a 15-minute walking distance from residential areas. Moreover, providing senior colleges, kindergartens and primary schools within a 15-minute walking distance might also promote cognitive health in older adults.

Citations


Key Words: built environment, 15-minute city, educational facilities, cognitive health, health equality

THE ROLE OF URBAN FOOD BANK MODELS AND GEOGRAPHIES IN SHAPING FOOD SECURITY AND WELL-BEING IN TORONTO, ON
Abstract ID: 273
Individual Paper

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During the depths of the COVID-19 pandemic in 2021, the number of visits to food banks in Toronto, Canada, increased to 1.45 million, up 47% from 2020 (Daily Bread Food Bank, 2021). Prior to the pandemic, approximately 13% of Canadians reported being food insecure - a number driven by a range of structural socioeconomic factors, including high housing costs and precarious employment opportunities. While food banks are not a solution to food insecurity, they do serve residents in difficult situations, and have become an important part of many cities’ social support networks (Cloke et al. 2017). In some cases, food banks are considered an urban food ‘asset’ where in addition to supplying food, they offer additional co-located services, like cultural programs and services for immigrants (Soma et al., 2022). While research on how co-located services improve outcomes is emerging in the health arena (Lalani and Marshall, 2022), relatively little has been published on co-location strategies from an urban planning perspective. With this in mind, we seek to answer the following two research questions. First, to what extent does food bank program design (e.g., choice models, integration into resource centres) impact food insecurity, fruit and vegetable consumption, and physical and mental health outcomes for clients? Second, to what extent is the decision to access a specific food bank driven by proximity, travel time, program design/service offerings, and/or linguistic/cultural relevancy?

To answer these questions, we partnered with Daily Bread Food Bank, which supports the largest network of food banks in the city of Toronto, to conduct two waves of surveys with food bank clients in Fall 2021 (n=838) and Fall 2022 (n=92), along with a series of interviews in late 2021 and early 2022. Clients were eligible to participate if
they were 18 years of age or older, could communicate in English, and accessed a Daily Bread Food Bank during our baseline recruitment period (October – December 2021). Intercept recruiting took place at a total of fourteen foodbanks, stratified across three dimensions: urban/suburban, stand-alone food bank/food bank with co-located services, and client choice food distribution model/hamper (e.g., preselected) food distribution model. Data collected via the survey included a validated measure of food insecurity, physical and mental health scores (via the SF-12), and a range of questions focused on participant’s demographic, economic, and dietary characteristics. In addition, built environment characteristics like transportation access to food banks and a national food environment measure were considered.

Preliminary results find expected associations between higher levels of food insecurity and lower self-reported physical and mental health after adjusting for socioeconomic covariates. A small preference for ‘hamper’ food bank models is identified for those with lower levels of food insecurity, while those with higher levels of food insecurity exhibited a small preference for ‘choice’ food bank models. No clear pattern emerged when looking at preferences for stand-alone food banks when compared to those food banks with co-located social services. Finally, our data show food bank clients often bypass a nearby food bank and spend extra time traveling to a location with different characteristics. In this talk, additional context will be added to the analysis derived from the survey through the incorporation of quotations from, and themes identified in, our interviews.

Ultimately, this presentation will explore the ways different food bank models and urban environments impact clients’ use of this critical service. Concluding thoughts will tie our findings to broader implications for urban food policies (Morgan, 2009) and the way city governments and non-profits seek to improve the health and well-being of urban residents experiencing food insecurity.

Citations


Key Words: food banks, co-located services, food insecurity, access, health

HARNESSING INNOVATIVE LOCATION-BASED SERVICE INFORMATION FOR ACTIVE AND SAFE COMMUNITIES: DEVELOPING A METHODOLOGY FOR PEDESTRIAN AND BICYCLIST SAFETY ANALYSIS

Abstract ID: 421
Individual Paper

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Walking and biking have gained increased popularity due to the benefits of physical activity, health, psychological well-being, leisure, and improved environmental quality. Walking and biking can be facilitated or constrained by the physical form of communities in general as well as transportation system in particular. Therefore the development of walkable and bikeable environment is one effective way to encourage active living and healthy community.
Along with these benefits of walking and biking, safety concerns have also risen. The higher risk of death and serious injury when crashes involve pedestrians or bicyclists increases the need to be proactive in reducing these risks.

Biking and walking flows are essential components in safety analysis. To design appropriate policy solutions, information about the pattern, intensity, and volume of events that could result in safety issues is critically important, as exposures and flows of walking and biking are highly associated with risks. Therefore a variety of pedestrian and bicycle exposure measures have been suggested but they are inconsistent and limited, and there is no widely accepted approach. In addition, the lack of walking and biking activity data available at a finer spatial resolution has been a major challenge in the safety research. However, recent studies have identified the potential for safety modeling given the recent advancement of ICT (Information and Communication Technology) coupled with geospatial technology introduced emerging data sources, including apps featuring LBS (Location-Based Service) through wi-fi, bluetooth, and smartphones. LBS data, such as that produced by StreetLight, have significantly improved in the last few years to be accurate enough for reliable use in modeling and planning work. The increased sample size, geographic coverage, and temporal coverage of LBS data could allow for volume-based modeling. To solve a variety of safety challenges, this research develops an innovative approach with emerging data sources of Location Bases Service information.

The motivation of the research is to enhance pedestrian and bicyclist safety with emerging active travel data. The objective of the research is to develop a reliable methodology for measuring pedestrian and bicyclist exposure and analyzing associated risks, which planners and designers can utilize to inform smarter decisions, making safer communities. To accomplish research objectives, the research develops a GIS model (coupled with statistical modeling) that estimates and displays pedestrian and bicyclist risk exposure at a street segment level. In doing so, the research utilizes location based service data processed by StreetLight. The output of processing is hotspot mapping, with which planners and designers can identify and prioritize risk locations. The research analyzes spatial and temporal variation of pedestrian and bicyclist activities and associated risks across a region. Most literature assumes that higher movement volume is associated with higher crashes. However, some locations have lower movement volumes but higher crashes, as location specific features of physical and social environments are also associated with potential risk. The research also analyzes built environment features and design elements at higher risk locations. The study area will be communities in Lincoln, NE.

The research contributes to the methodological improvement in transportation safety planning, and to the knowledge of the human-environment interactions. From planning practice side, the research outcome can be utilized by transportation planners and urban designers to identify and prioritize locations of higher risks where safety improvements would be most effective. This enhances local government’s ability to proactively address safety issues.

Citations


Key Words: Active and Safe Community, Pedestrian and Bicyclist Safety, Location Based Service Data, Urban walkability and Bikeability
THE MEDIATING ROLE OF SOCIAL CAPITAL IN THE RELATIONSHIP BETWEEN MULTIPLE DETERMINANTS AND INDIVIDUAL STRESS
Abstract ID: 507
Individual Paper

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There is a well-established correlation between stress and negative health outcomes, as demonstrated by various studies. Although previous research has examined the direct association between social capital and perceived stress, less attention has been given to the potential indirect impact of social capital on stress levels through the provision of accessible resources. This study aims to fill this research gap by investigating the complex determinants of social capital and their influence on perceived stress.

The study conducted in Orlando, FL employed a comprehensive survey to measure various factors, including stress levels, social capital, socio-demographic characteristics, personal health status, residential behavior characteristics, individual personality, and physical environments. The proposed conceptual framework was tested using a robust structural equation model to test the proposed conceptual framework.

Results indicated that social capital acted as a mediator in perceived stress levels, and that community center use had both direct and indirect effects on stress levels through social capital. Additionally, the study revealed that individuals who expressed satisfaction with their neighborhood's cleanliness enjoyed a higher level of social capital and a lower level of stress indirectly through social capital. In contrast, households with a higher income level and more children exhibited a lower level of social capital, while individuals with chronic diseases who were more extroverted, agreeable, and open to others experienced a higher level of social capital.

The results of this study have important implications for policymakers and community development practitioners. By highlighting the role of social capital in mediating the relationship between community center use and stress levels, the study suggested that investments in community centers and other social infrastructure may be an effective means of reducing stress and promoting well-being in neighborhoods. Furthermore, the finding suggested that maintaining clean and well-maintained public spaces may be an important component of community development efforts aimed at improving social cohesion and reducing stress. This study emphasizes the importance of a multifaceted approach to community development that considers not only the physical environment and infrastructure but also social networks and relationships. By investing in both social and physical infrastructure, policymakers and practitioners can create more resilient and supportive communities that promote the health and well-being of all residents.

Citations

CIRS STORIES: EXAMINING MOLD ILLNESS AS A COMPLEX PLANNING PROBLEM

Abstract ID: 581

Individual Paper

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Chronic inflammatory response syndrome (CIRS) is a multisystem, multi-symptom illness that is most commonly triggered by prolonged exposure to the interior of a water-damaged building, and the resulting inflammmagens, including actinobacteria, endotoxins, and mold (Shoemaker & Vukelic, 2023). CIRS patients routinely possess a human leukocyte antigen (HLA) gene that prevents their bodies from naturally removing biotoxins, allowing the biotoxins to continue to circulate throughout the body (McMahon, 2017). The result is chronic inflammation throughout the body, which can result in a myriad of seemingly unrelated symptoms, including but not limited to fatigue, memory loss, concentration difficulties, joint pain, appetite swings, urinary frequency, blurred vision, mood swings, diarrhea, disorientation, and vertigo (McMahon, 2017). If left untreated, CIRS can become debilitating. Awareness is limited, with a small number of medical professionals having completed the extensive training to treat the complex illness. Treatment is seldom effective unless the individual can remove themselves from exposure. This research examines how CIRS impacts the lives of individuals and frames the illness through the lens of complex planning problems. Sequential, structured interviews were conducted among a purposive sample of CIRS patients. Interview protocols were divided into 3 sequential sections, including life experiences before the onset of CIRS symptoms, journeys to diagnosis, and journeys to healing. Interviews were then recorded, transcribed, and coded using open and focused coding. The four themes of contrast, misunderstanding, loss, and steering forward were derived. Results depict the urgency for increased awareness on the dangers of prolonged exposure to water-damaged buildings.

Complex planning problem theories by Christensen (1985) and Rittell and Webber (1973) were used to analyze the results. Christensen's (1985) matrix of uncertainty categorizes CIRS as a Category C problem because the technology for treating and preventing CIRS is known, but the goals are not agreed upon due to different stakeholders having different interests in the process of cleaning up water-damaged buildings. Because only about 24% of the population possesses the HLA gene that makes an individual susceptible to CIRS (Shoemaker and Maizel, 2009), not everyone gets sick from prolonged exposures. This dynamic oftentimes discourages decision-makers from taking action. The current state of CIRS fits one of Rittel and Webber's 10 criteria of a wicked problem (Rittel & Webber, 1973). This is their eighth criterion, which states that every wicked problem can be considered to be a symptom of another problem (Rittel & Webber, 1973). CIRS is a symptom of greed. If only about 24% of the population is at risk of developing CIRS, it becomes easier for a money-driven individual to downplay the seriousness of the risk and avoid taking action to ensure that individuals are not subjected to prolonged exposures to water-damaged buildings. Having knowledge of the technologies for treating CIRS and an understanding of the cause of the problem puts this illness in a much tamer realm when compared to other types of complex problems that are rooted in uncertainty. However, the issue of greed remains. This research calls for standardized federal regulations pertaining to the cleanup of existing water-damaged buildings as well as stricter building standards to mitigate the risk of water damage in new construction.

Citations


Key Words: CIRS, mold, complex problems, public health, housing

LOCALIZATION OF COMMUNITY-BASED DISASTER RESPONSE ORGANIZATION: SEATTLE EMERGENCY HUBS AND SENDAI BOSAI LEADERS
Abstract ID: 587
Individual Paper

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In recent years, the importance of Community-Based Disaster Response Organizations (CBDROs) has increased in the United States and Japan, with new roles and structures emerging in both countries. This research explores the roles of community-based organizations in disaster prevention and response via a case study comparison of two localized examples of CBDROs: the Seattle Emergency Hubs in Seattle, Washington and the Sendai Bosai Leaders in Sendai City, Japan. Through interviews and document analysis, we investigate ways in which place-based CBDROs have localized in response to shifts toward community-scale disaster preparedness in their respective countries. We explore the similarities and differences between the two organizations, with a focus on the successes and challenges faced by each.

Due to their locations along the Pacific Rim of Fire, both Seattle and Sendai face the threat of a devastating subduction zone megaquake event. The roles of the CBDROs and officials are seen as complementary in both places, with recognition that in a catastrophic megaquake event, residents cannot expect to be rescued by officials. In the case of Sendai, this is based on the experience of the 2011 Great East Japan Earthquake. In the Pacific Northwest of the U.S., where Seattle is located, a similar scale of event – a magnitude 9.0 Cascadia Subduction Zone earthquake – is anticipated to occur in the foreseeable future. Emergency managers anticipate that communities will need to be self-sufficient for up to three weeks following such a disaster.

Disaster management philosophies in both the U.S. and Japan have shifted in recent decades to increase emphasis on community-level disaster response. This is due in part to the increase in the scope and impact of disasters more generally as well as in response to specific events that have highlighted the need to leverage community resources and networks more effectively in disaster preparedness, response, and recovery. Following failures in response to Hurricane Katrina, FEMA adopted a “whole community” approach that represents a departure from traditional disaster risk management approaches in the U.S., which have relied heavily on government resources and action. In Japan, although jishubo – voluntary disaster prevention organizations situated within formalized neighborhood associations – have been a standard component of disaster management nationwide since the 1970s, they have received renewed government attention and have been more heavily promoted since the 1995 Hanshin-Awaji Earthquake.

Within this context, localized CBDROs have developed in both countries with explicit aims of integrating local knowledge, community social networks, and place-based resources into broader disaster management frameworks, albeit via different strategies that reflect their unique settings. The Sendai Bosai Leaders work closely with local school districts to promote disaster preparedness and are involved with conducting disaster drills, providing emergency supplies, and managing evacuation centers housed in municipal buildings and community facilities. While the Seattle Emergency Hubs network also engages in disaster preparedness education and drills,
the organization operates autonomously from local government and is primarily focused on coordinating information sharing within and between communities during times of disaster rather than managing shelters and the distribution of supplies.

We find that while volunteer-run CBDROs play significant roles in both countries, their functions and relationships to official government agencies vary greatly, as do the ways in which they are networked with other community organizations. Comparing the experiences of the Seattle Emergency Hubs and the Sendai Bosai Leaders provides insight into the successes of, and challenges faced by, localized CBDROs. Our findings highlight opportunities for learning across experience as well as ways in which both urban planners and emergency managers can help to support community-level disaster preparedness efforts.

Citations


Key Words: community resilience, disaster preparedness, case study, localization, volunteer organizations

UNDERSTANDING THE IMPACT OF LOCAL BUILT INFRASTRUCTURE AND PROVISIONING SYSTEMS ON WELL-BEING IN DELHI, INDIA
Abstract ID: 802
Individual Paper

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Exploring what influences human well-being and how to promote well-being is a priority for research and policymaking as these are key to creating and maintaining healthy, productive societies (Diener, 2009; Durand, 2015). Recently, in addition to the use of objective proxies of well-being, such as income, literacy, and life expectancy, the use of subjective measures, that directly measure the well-being of individuals, has become common across the globe (Helliwell et al., 2022; Oguz et al., 2013). Subjective well-being (SWB), which incorporates perceptions and life experiences, can be defined as “a person feeling and thinking [that] his or her life is desirable regardless of how others see it” (Diener, 2009). SWB has three distinct components: evaluative, emotional, and eudemonic SWB (Oguz et al., 2013).
During the process of designing and managing living environments, urban planners need to understand how the local built environment influences well-being as this is critical to enhancing the living experience of residents and providing them with opportunities to flourish. While the number of studies looking at the interaction between infrastructure and well-being across multiple spatial scales is growing in developed countries (Das et al., 2022), limited research has been conducted in developing countries, such as India. To the best of our knowledge, no such research has been conducted in India at lower levels of spatial disaggregation, such as cities, neighborhoods, and households, leaving many questions related to how local built infrastructure impacts resident well-being unanswered. As Indian cities plan for the future and try to accommodate a growing urban population, data-driven approaches that explore the connection between urban infrastructure and well-being will be pivotal tools in planning a healthier, more sustainable, and more resilient tomorrow.

In this study, we explore the interactions between local urban infrastructure and resident well-being by conducting online and in-person surveys in Delhi, India, that focus on resident perceptions of the local built infrastructure (e.g., home quality, water supply and sanitation, roads, access to amenities, etc.), social systems (e.g., family networks, social networks, etc.), public services (e.g., waste management, policing, government assistance, street cleaning, etc.), and the natural environment (e.g., air, noise, greenery, etc.) from the household level to the neighborhood level to a city-wide scale. We investigate the relationship of these elements of infrastructure with the three distinct components of residents’ SWB (i.e., evaluative, emotional, and eudemonic). The surveys also collect information on socio-demographic characteristics and other key culturally specific and interdisciplinary variables known to influence SWB. Data is currently being collected in Delhi, India, with an anticipated overall sample size of 700 residents from diverse neighborhoods, which will be representative of the city’s population.

Using the data-driven methodology developed in Das et al., (2022), we will identify improvement priorities to promote SWB based on the nature of the relationship between the satisfaction that respondents report with various aspects of infrastructure and their SWB while controlling for several key confounding variables. In addition, we will focus on highlighting ways to promote equity by exploring neighborhood improvement priorities based on income, religion, caste, and gender. Findings from the study will help policy-makers and researchers: 1) to better understand the impact of local built infrastructure on well-being, 2) identify specific areas where planning solutions can intervene to improve residents’ SWB, 3) plan to promote equity in SWB outcomes, 4) strategize to prioritize neighborhood infrastructure investments to promote SWB, and 5) understand the differences and/or similarities in the local built infrastructure correlates of well-being in India and the U.S.

Citations


Key Words: subjective well-being, local built infrastructure, health equity, well-being in India, neighborhood planning

EXAMINING FOOD ACCESS EQUITY BY INTEGRATING GROCERY STORE PRICING INTO SPATIAL ACCESSIBILITY MEASURES
Abstract ID: 833
Regional food environments are essential elements of urban lives since consumption behaviors are influenced significantly by food store accessibility. Ensuring urban residents enjoy a healthy life requires better access to fresh product options. Nevertheless, the distribution of healthy food options is not uniform in most US urban areas (Su et al., 2017), raising concerns about low-income and other communities' lack of access to affordable, nutritious food (McKenzie, 2014). As a result, healthy food accessibility and equity discussions have become trending amongst urban planners worldwide. Food environment studies have acknowledged the importance of spatial methods in evaluating people's proximity to food stores. That said, studies on food access have reported the emergence of several food deserts within US cities, the reason being transportation-related barriers such as car-dependent urban form and spatial mismatch especially for marginalized populations (Black et al., 2011; Jiao et al., 2016). Spatial Interaction models, which are commonly employed in retail planning and location analysis (Guy, 1977), have been used in prior studies to investigate how supply, demand, and geographic isolation affect people's ability to access the food they need (Clarke et al., 2002). The review of literature on this topic shows that food access measures have mostly relied on (a) a large unit of analysis, (b) arbitrary travel-time thresholds (Chen, 2017), and (c) have ignored the utilization component of food security (Peng & Berry, 2019), which results in imprecise food accessibility measures. Accordingly, this study tries to explore the disparities in accessing healthy food options for different socio-demographic groups and identify food deserts in Houston-Galveston Area.

To address this shortcomings and achieve a comprehensive understanding of food accessibility, we extend Hansen's (Hansen, 1959) gravity-based accessibility measure to develop a disaggregated model of food accessibility tailored to a format for measuring equitable food access. To do so, on the supply side, we utilize food store location data (separated into high-price and low-price grocery stores) to measure available alternatives. On the demand side, we utilize household income as a proxy for households' financial capacity to purchase food. Along with these inputs, we use a GIS-based travel time matrix between all Traffic Analysis Zones (TAZs) both for driving and walking trips as inputs for travel impedance to complete the model. We determine minority dominant areas by utilizing regional population thresholds and American Community Survey's sociodemographic attribute data. Then, based on minority dominant areas, we break down accessibility by subsets of the population; after that, we employ Gini Coefficients and the ratio of the accessibility shares to population shares (AS/PS ratio) to inform our findings (Akee et al., 2019; Dagum, 1998; Litman, 2021). Furthermore, we provide a detailed vertical equity analysis to compare disparities in accessing healthy food experienced by minorities across urban and rural counties of Houston. By examining the patterns of vertical equity, our research aims to provide empirical insights for policymakers and planners to address the issue of food insecurity and promote equitable access to healthy food for all minority groups. The findings of this study could shed light on distributional impacts of food accessibility and spatial locations of food deserts which can generate implications for addressing this issue by suggesting supplementary and small-scale interventions to ameliorate the negative impacts of food deserts on well beings of population, especially for marginalized groups in greatest needs.

Citations


Key Words: food accessibility, Gravity-based models, horizontal equity, vertical equity, Gini Coefficients

TRAVEL LOG FOR PHYSICAL ACTIVITY AND TRANSPORTATION RESEARCH: CHALLENGES AND ALTERNATIVES
Abstract ID: 909
Individual Paper

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Travel diaries or logs have been widely used in research as a feasible way to retrieve individuals' travel behavior information. They have been used to collect travel mode, time, purpose, locations of origins/destinations, etc. in multiple fields of research including transportation, urban planning, and public health. With the growing interest in promoting active transport (e.g., walking, bicycling) as health-promoting daily physical activity, travel logs have been increasingly used in the recent body of interdisciplinary studies (Choe et al., 2023; Fishman, 2015).

Despite the increasing availability of objective and technology-based tools such as GPS (Global Positioning System) units and smartphone apps (Alho et al., 2022), self-reported travel diaries remain as a versatile means to gather key travel information with a relatively low cost especially in large-scale population surveys/studies (e.g., National Household Travel Survey). However, limitations and challenges associated with this traditional travel log method have been identified, which included recall bias, social bias, and missing/inaccurate data (Scully et al., 2017).

This study draws from the experiences in using the travel log in two NIH-funded natural experiment projects in Texas. Both projects used a paper-version travel diary along with the GPS and accelerometer units to collect the travel data from each participant for 7 days. The primary objectives of the study are to 1) discuss common problems/errors found in two research projects and 2) evaluate a smartphone-based method as an alternative to the traditional self-report travel log and discuss its relative advantages and disadvantages.

The preliminary results identified some common errors in the travel log falling into two groups: time errors and trip errors. Time errors included 1) missing time (trip start and/or end time), 2) arrival time at destinations when participants entered the duration of stay at the destination instead, 3) time errors with multiple overlapping trip times, and 4) AM/PM missing with the time reports. Common trip errors are 1) missing the travel mode information, 2) participants not providing the destination names/locations, and 3) activities listed as destinations instead (when participants entered activities, e.g., lunch or shopping as their destinations. The most prevalent error was the time error where participants entered the duration of their stay at their destinations.

Based on what we learned from these two projects, we tested the validity and feasibility of a research-grade smartphone app (i.e., Daynamica, rMOVE) method to collect the same/similar trip information among 32 participants of varying ages and both genders. Preliminary results showed that while the overall trends were similar and highly correlated, the total trip counts were under-estimated with the travel diary compared to the app (10.9 vs. 12.7 trips/week, p=0.014), and the average trip length was longer based on the travel diary compared to the app (18.9 vs. 14.5 minutes, p-value=0.0012). The overall usability of the app, assessed using the System Usability Scale (SUS) (Brooke, 1996), showed that the average score is 59.2 out of 100 (SD of 25.9). Further analyses will identify the sources of these differences and the relative advantages and disadvantages of smartphone-based travel diary applications.
This study makes an initial step toward understanding the prevalence of common errors in travel logs and their potential implications and alternatives. It first provides a comprehensive assessment of the types and prevalence of common errors found in traditional travel diary methods and then shares the assessment results of an alternative method using a research-grade smartphone application. The study offers insights and lessons learned from using both the traditional travel log methods and the novel smartphone app to guide future efforts requiring the collection of detailed trip data in both transportation and physical activity research.

Citations


Key Words: Travel diary, Transportation research, Physical activity, Smartphone-based applications

BUSINESS PARTNERSHIPS FOR FOOD ACCESSIBILITY

Abstract ID: 948
Individual Paper

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Street foods are a crucial element of the food system: they provide food security for millions of urban dwellers and income for thousands of small entrepreneurs. However, many street food businesses operate on the fringe of the law due to the lack of flexible regulations that allow them to function on public spaces such as streets and sidewalks. At times, the social injustices some street vendors face are obvious, as in the case of the City of Chicago, where the city prefers some types of vendors (e.g., high-income white gourmet chefs and their food trucks) over others (low-income immigrant peddlers and their pushcarts) (Martin 2014). In other cases, such as in New York City, a legal pathway for street vending permits is available but virtually impossible to obtain due to the limited permit supply and years-long waiting times (Devlin 2011). Therefore, many street businesses operate without a legal permit. The informal nature of these businesses has left them sidelined by city officials, planners, and other stakeholders. In some cases, street vendors are prosecuted and forcefully removed from the streets by city officials. Maintaining “order” on the streets by removing street vendors is a narrow-minded strategy that could put millions of people at risk for food security. This outcome is especially true when removal happens without securing other means of food access for community members (Hayden 2021). Even when vendors have a legal permit, local residents and business owners see them as a nuisance and an out-of-place element (Yatmo 2008). Consequently, street vendors engage in several activities to thrive and avoid confrontations or removal. For example, street food vendors sell their products in different locations throughout the day. This always-on-the-move strategy makes it challenging for government officials to identify them and enforce regulations. However, while this strategy may
facilitate their survival, it can hinder the vendors’ economic gains as the vendors’ daily presence may be unknown to new customers. Our research team was interested in exploring other strategies that street vendors engage in to create visibility in the community while creating a sense of protection. Thus, in assessing the food environment in the city of Phoenix (AZ), where street permits are stringent, the research team noted that street food businesses were frequently found on the premises of specific businesses: automobile service businesses (e.g., tire shops, auto shops). These locations are not where people typically find ready-to-eat food but could be a key tool in addressing food accessibility. Therefore, the objectives of this study were 1) to evaluate the frequency and distribution of automobile service-street food partnerships and 2) to assess whether there were differences in their distribution linked to sociodemographic and other neighborhood characteristics (e.g., zoning, walkability, food desert). We used business directories to identify businesses, geographic information systems to map partnerships, and logistic regressions to analyze the prevalence and distribution of business partnerships. Results showed that business partnerships happened in low-income, Hispanic neighborhoods and in areas with limited access to other food sources. Our results have several implications, including increasing the food environment’s diversity, increasing food access, and creating economic opportunities for local entrepreneurs. Today, given the growing divisions across places and groups of people, there is a need for strategies that can increase food and job security opportunities across all sectors of society regardless of sociodemographic background. Street vending can be such an alternative. City planners and officials in the city of Phoenix can play a crucial role in creating more opportunities for street entrepreneurs by encouraging these types of partnerships in areas where access to food is needed.

Citations


Key Words: Street food business, Informal economy, Food access

INCREASING DIRECT-TO-CONSUMER SALES AT CALIFORNIA FARMERS MARKETS: PILOTING AN ONLINE SALES PLATFORM DURING THE COVID-19 PANDEMIC
Abstract ID: 981
Individual Paper

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During the unprecedented season of 2020 due to COVID-19, supply chain disruptions brought fluctuations and new variables to local farmers’ markets and other direct-to-consumer (DTC) market channels. For some, DTC sales at farmers’ markets, roadside stands, and CSA’s (Community Supported Agriculture) skyrocketed. Others lost their wholesale clients such as restaurants, distributors, and institutions. Even those markets that did not see a large drop in sales, saw a large increase in operational costs due to the cost of Personal Protective Equipment (PPE) and other public health measures (O’Hara, Woods, Dutton, & Stavely, 2021). Furthermore, while e-commerce platforms and food delivery services have been growing the past 10 years, these services exploded during the
pandemic. As an example, Instacart saw three years projected growth - 500% - take place during March of 2020 (Wiggers, 2020).

For many consumers, the convenience of ordering online and food delivery is a high priority. And based on pilot data, there is a significant demographic that is willing to pay more for locally sourced food. For others, the ability to order online, pay with a SNAP EBT Card, and receive deliveries would make farmers markets accessible for the first time (Kellegrew, et al., 2018). Low-income consumers, including young adults, families with young children, seniors, minorities, and those with disabilities and mobility limitations hold significant market potential to grow the overall consumer-base that participate in farmers markets; not only do these consumer groups represent untapped market potential, but when those that are on Federal nutrition programs spend their benefits at local farmers markets, they bring federal dollars and matching dollars into the local community (Brown & Miller, 2008; Deller, Lamie, & Stickel, 2017). Furthermore, investing in broad-based, equitable, and diverse consumer engagement ‘lifts all boats’ by making Farmers Markets a place for the whole community—not just California Wine Country’s culinary tourists and affluent ‘foodies.’ However, there is limited research on how farmers markets can successfully leverage these trends for their local advantage.

This paper presents findings from a USDA Farmers Market Promotional Program grant. Through partnerships with local non-profit and market organizations, this study analyzes how DTC online platforms in Northern California helped increase the reach of farmers markets during the COVID-19 pandemic. A series of pilot approaches were evaluated and analyzed using a mixed methods approach. The paper connects a variety of datasets to understand the local and regional market landscape for the Sonoma/Marin Counties in California, and contrasts these findings with parallel trends at the state and national level. This paper makes policy recommendations to address ways of increasing the reach of markets to communities with limited access through online sales platforms. The findings suggest sustainable operating models that prepare farmers markets to maintain their values, relationships, and community connections for future environmental disasters and be resilient during times of crisis.

Citations


Key Words: Food access, Farmers Markets, SNAP/EBT, Food systems

THIRD PLACE AND LONELINESS IN OLDER ADULTS
Abstract ID: 1045
Individual Paper

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More than half of individuals over 60 are at risk of social isolation, and a third are bound to experience loneliness (Fakoya et al., 2020). Social isolation and loneliness can be detrimental to the older adult’s health and well-being,
as researchers suggest loneliness has a close relationship with chronic illness and self-rated health (Alpass & Neville, 2003). The matter has worsened due to Covid-19 by the restricted social interaction and suspended social events. Researchers recognize the role of third places (public spaces for social interaction beyond the realms of the home and work (Oldenburg, 1989)) as a way to socially connect with friends and family and increase casual interaction, which can mitigate loneliness and social isolation. This research aims to examine the relationship between third places and the loneliness of older adults by looking at access to third places, the role of travel, and destination access in modifying the relationship between third-place access and loneliness. Based on the survey of 722 adults aged 50 and older in Utah, we compared the effect of various third places on older adults’ quality of life and loneliness. Linear regression models were developed to examine the relationship between access to third places and loneliness. We also examined possible moderating roles of travel behavior and destination access to third places. Our analysis revealed that the access to third places, such as cafe, bar, theaters, is related to older adults’ travel behavior and satisfaction. More analysis focused on loneliness and quality of life will be investigated further. Our preliminary findings suggest a potential protective effect of third places in promoting older adults’ quality of life and reducing loneliness and social isolation.

Citations

- Oldenburg. (1989). The great good place?: cafés, coffee shops, community centers, beauty parlors, general stores, bars, hangouts, and how they get you through the day / ([2nd ed.]). Marlowe & Co.

Key Words: third place, loneliness, travel mode, accessibility, older adults

SAFETY ON AN URBAN CAMPUS
Abstract ID: 1087
Individual Paper

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Central Theme. Gender-based violence against women and other marginalized populations is a significant problem in cities and university campuses across the globe. Cincinnati and the University of Cincinnati campus are no exception. On UC’s Uptown Campus, according to the Department of Public Safety, 28 cases of rape were reported on campus (including residence facilities) in 2021, with 16 cases in 2020, with 15 in 2019 and 9 in 2018. Aggravated assault included 5, 15, 16, and 24 incidents for the same years (though not necessarily against women).

This project employs GIS of University of Cincinnati records to identify “hot spots” on or near campus. The locations were examined for their physical qualities of the built environment. These results will eventually be compared to results from a cellphone mapping app that tracks respondents’ perception of the safety of specific spaces on and around campus. Focused largely on the built environment, the official records and self-reporting will be compared to produce a data base of campus locations associated with violence.

The focus on the built environment reflects how elements are often designed and installed without adequate consideration of how they may increase potential for violence against women and other vulnerable populations. In terms of the characteristics of the spaces, the focus is on variables raised in the literature: lighting, openness, visibility, people, security, walk path, public transport, gender usage, feeling.
Approach and Methodology. This phase of the research entails mapping crime data based on City of Cincinnati and the UC Department of Public Safety's records, beginning with on-campus incidents, and extending to near-campus incidents. All incidents are recorded and then filtered for gender-based events. Key areas are identified, photographed, and examined for physical attributes.

Main results. In addition to GIS results, qualitative analysis of photographic evidence (with MaxQDA) identifies elements of the built environment that reveal patterns.

Relevance. This phase of the research examines the official data on crimes from university and municipal reports. Ultimately, the project will identify places that make persons feel vulnerable, recognizing that violence against vulnerable populations is facilitated by the physical environment in which they live. The project will eventually incorporate modification of software and analytical approaches to examine patterns of crime and perceived risk and to develop strategies to advocate for mitigating problems and new construction on/near campus.

Citations


Key Words: crime and fear of crime, built environment, Crime prevention through environmental design, risk and safety

DEVELOPMENT OF A SOCIO-SPATIAL MODEL FOR PRIORITIZING LEAD SERVICE LINE REPLACEMENT BASED ON SOCIAL JUSTICE, HEALTH, AND SAFETY FACTORS
Abstract ID: 1088
Individual Paper

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Central theme: This presentation details efforts to develop a socio-spatial model for the prioritized replacement of lead service lines (LSL) of a large US municipal water utility. Lead in tap water is the second largest source of lead exposure for children in the US. Lead poisoning in children remains an important public health issue, with CDC estimating ~500,000 US children with elevated blood lead levels (EBLL) and even low levels can affect learning, ability to pay attention, and academic achievement (CDC 2023). Mitigating further exposure can improve long-term health (CDC 2023). This research answers questions about how prioritization models can be specified both conceptually and practically. The developed model prioritizes rapidly reducing exposure for the most vulnerable
children based on social justice criteria, health safety factors, and water utility repair and maintenance protocols.

Approach and methodology: The research team consists of an environmental planning researcher with advanced geo-spatial analysis skills, and a healthy urban planning researcher with extensive socio-spatial analysis experience. The approach and methodology have been conceptualized based on planning theory, examples in the literature, and locally specified requirements and characteristics.

The research methodology involves determination of how LSLs in water utility service area are connected to cases of EBLL, and health safety factors associated with EBLL. Water utility data for scheduled maintenance projects also are included. An analytic hierarchy process (AHP) is used for organizing and analyzing decisions based on alternative weightings of the factors included in the model. Project data is compiled at two spatial levels.

Analyses at the first level involve linking specific LSLs addresses with key physical factors related to EBLL. The total number of LSLs for each relationship is summarized by census block. Also, water utility’s scheduled maintenance projects are overlaid with LSLs and aggregated at census block level with respect to the type, number and timing of projects.

Analyses at the second level involve specification of US Census data for the water utility’s service area at census block group level for total population plus health safety factors for lead poisoning.

The resulting data is used in a LSL replacement prioritization model based on systematic assessment of the impact of LSL replacement, with results shared with water utility management and community stakeholders. AHP allows alternative weighting of relative importance of different factors associated with LSLs at census block level. Assessments of the factors are collected from water utility staff and customers, and other community stakeholders, ultimately informing final recommendations for LSL replacement priority.

Meaningful and new findings: Preliminary results show benefits of analyzing spatial-referenced physical and social data with AHP. The combination allows clear advantages for organizing and analyzing prioritization decisions using systematic assessment of alternative weightings of key LSL-related risk factors from tap water. Findings are especially important where public engagement and social justice considerations deviate from strict adherence to bureaucratic technical efficiency criteria.

Relevance and implications of work for planning scholarship, practice, and education: Results have implication for planning scholarship, practice and education for a wide range of important issues. The ability to systematically assign alternative weights facilitates inclusive decision-making based on enhanced understanding of impacts on other choices. It also permits sensitivity analysis based on shared values with limited resources. The collaboration between planning researchers and students and water utility professionals in this project reflects the recognition of the important roles of planning researchers, practitioners and students played in systematically addressing the “wicked problems” we face.

Citations

HEAT WAVE EFFECTS ON URBAN RESIDENTS’ ACTIVITIES BASED ON BIG DATA IN SEOUL: FOCUSING ON THE ELDERLY

Abstract ID: 1134
Individual Paper

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This study examined heat wave effects on urban residents’ activities with a particular focus on the elderly. High-temperature events are considered among the most catastrophic weather-related disasters. Heat waves directly affect the health and activities of individuals, increase the incidence of heat-related and chronic diseases, deteriorate health conditions and cause mortality due to related diseases, and directly impact outdoor activities such as leisure, labor, production, and movement. This study targeted Seoul in summer, 2018, and utilized population and meteorological big data to conduct a spatial panel analysis in consideration of spatiotemporal dependencies.

Comparing the average sensible temperature distribution with the active population distribution indicated that citizens’ activities were concentrated in areas with relatively low sensible temperatures. To specifically demonstrate this, a spatial panel analysis was conducted on the effect of heat waves on activities of all age groups, the elderly group, and the non-aged group on weekdays and weekends during the entire study period. Sensible temperature-based analysis showed that heat waves resulted in urban residents participating in significantly fewer activities. In particular, this study proves that there was a greater decrease in residents’ weekend activities, when they had more selective activities, compared to weekday activities. Especially, a comparison per age group indicated that activities of the elderly were more vulnerable to heat wave effects than those of other age groups.

Based on this empirical study, it is necessary to recognize that fewer activities of urban residents should be regarded as a type of heat wave damage. The study also found that policies regarding summer heat waves for the elderly, i.e., a group that is vulnerable to heat waves, should consider the damage to activities and health conditions around residential or neighborhood living areas, in which the elderly are mainly active. This study examined the relationship between urban residents’ activities and heat wave effects at a spatiotemporal level, and the results implied the necessity for directly linking existing heat wave mitigation measures to the activities of urban residents in summer.

Citations


Key Words: Spatial Analysis, Big Data, Heat Wave, Urban Residents Activities, spatial Panel Analysis

USING THE SOCIAL-SPATIAL DETERMINANTS OF HEALTH TO UNDERSTAND THE IMPACTS OF LARGE-PRODUCING-ADVANCED MANUFACTURERS
Abstract ID: 1146
Individual Paper

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Manufacturing in the United States has long been an opportunity for people to build better lives for themselves and their families. Access to higher-paying wages and benefits, including insurance and job training, create health and well-being impacts (Weida et al., 2020) that ripple beyond the individual to the community (Kolak et al., 2020). At the same time, manufacturing facilities can attract supporting businesses which further help to improve the community. Using the social determinants of health as a framework to understand the spatial benefits of manufacturing, this study asks what are the impacts beyond jobs for ZIP codes with large-producing-advanced manufacturing facilities compared to ZIP codes without facilities? To answer this question, this study analyzes large-producing-advanced manufacturers (LPAM) and assess changes in surrounding ZIP codes from 2011-2019 based on sixteen indicators across five categories – economic stability, education, health care access, neighborhood and built environment, and social/community context. LPAMs see improvements across most measures, including an increase in the number of residents working in non-low wage jobs and the number of daycare facilities and grocery stores. Our results demonstrate that large-producing-advanced manufacturers benefit communities beyond jobs, and that benefit is most acute in Black and high-poverty communities. Findings from this research supports the call to understand the overlapping factors that impact health equity (Williams et al., 2023) while also providing policymakers at the national, state, and local levels and the broader audience of planning professionals interested in an integrated planning approach (Lowe et al., 2018) a better understanding of where to site both large and smaller-scale manufacturing facilities to ensure compounding societal benefits. Further, this research will make theoretical contributions by exploring the relational impacts of manufacturing facilities on socioeconomic and other social factors of the built environment.

Citations
WALKING FOR STRESS: STRESS-INDUCING ENVIRONMENTAL FACTORS DURING WALKING IN NEIGHBORHOODS

Abstract ID: 1165
Individual Paper

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Background and Purpose: Regular physical activity is important to improve individuals’ health and well-being. Among the many forms of physical activity, walking is an easy and affordable way to obtain a healthy dose of daily activities. Walking, especially in outdoor environments, require supportive infrastructure and features (e.g., sidewalks, crosswalks, parks/recreational facilities, utilitarian destinations) that accommodate and encourage walking. However, urban communities in most American cities present many obstacles and stressors for pedestrians. Contrasting to most previous studies on walkable communities that focused on the relationships between the environmental characteristics and amounts of walking, we focused on how pedestrians physiologically react to the environments they’re exposed to while walking.

Objectives: Using the field experimental data carried out in two different community settings (one in Houston and one in College Station, Texas), this study examines built environmental factors at the street level that contribute to increasing the stress levels of pedestrians. This abstract only shares the method and results of the College Station experiment which is completed. The Houston experiment is currently underway with a target completion date of June 2023.

Method: The College Station field experiment was conducted during the spring and summer of 2021. A total of 54 participants walked along a pre-defined route (10-15 minutes) wearing validated devices to collect electrodermal activity (EDA), physical activity intensity and location, and video recordings of the visually exposed environment. Research staff also followed each participant carrying additional instruments to collect the microclimate and air quality data.

Skin Conductance Level (SCL) extracted from the raw EDA data were used to measure the real-time stress responses from each participant. Built environmental variables were measured using the GIS data from the City of College Station. Street audits were conducted by our research staff using a validated audit instrument to measure the detailed street/sidewalk characteristics and their maintenance conditions. Normalized Difference Vegetation Index (NDVI) was used to quantify the level of greenness along the route based on the satellite images. Multi-level regressions were conducted to explore the relationships between environmental characteristics and stress levels.

Results and Next Steps: After controlling significant covariates (age, gender, and BMI), mean NDVI (greenness) showed a significantly negative association with the stress levels (β=-6.0274, p-value<=0.001). Street parking (β=2.0298, p-value=0.001) and litter on the sidewalk (β=1.3891, p-value=0.008) were related to increased stress levels. The next steps involve the analysis of eye-level images and the addition of the Houston field experiment data to further identify the detailed elements of the built and thermal environments in the two community settings that induce stress responses among pedestrians and the similarities and differences between the two communities and across participants of different ages and genders.

Conclusions: Preliminary results of this study suggest that more greeneries in urban communities can relieve the stress levels of those using the outdoor environment for physical activity such as walking. Stress-inducing environmental conditions such as street parking and litter require priority attention to ensure the maximum health benefits of walking and physical activity.
Citations


Key Words: Walking, Stress, Greenness, Street environment, Physical activity

SPATIAL DISPARITIES OF MENTAL HEALTH BEFORE AND AFTER THE COVID-19 EMERGENCE

Abstract ID: 1205
Individual Paper

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The emergence of COVID-19 caused the growth of mental illness. Self-isolation and quarantine by COVID-19 close contacts and infections and lockdowns increased loneliness, anxiety, depression, suicidal behavior (World Health Organization 2020). Given that mental illness can be a threat to community stability as well as negatively affecting individual physical health, maintaining good mental health is very important for both individual and community well-being.

As the ecological model suggests, community characteristics such as socioeconomic status, physical environment, and public healthcare services are related to mental health in addition to individual characteristics (Sallis et al. 2015; Stokols 1992). Along with these associations, studies find that there are urban-rural health disparities as rural residents have lower access to healthcare (Miller&Vasan 2021; Cosby et al. 2019). While COVID-19 lowered individual mental health level, COVID-19 might reduce the urban-rural disparities in mental health. It is likely because the stress of COVID infection was high in urban areas and the sensitivity to social distancing was lower in rural area (Liu et al. 2021). However, the effect of COVID 19 on spatial disparities, especially, of mental health remains largely unknown.

This study aims to examine the change in spatial disparities of mental health before and after the emergence of COVID-19. For the empirical analysis, we used the Korea Community Health Survey data in 2019 and 2021—the years before and after the emergence of COVID-19. The data sets include over 200,000 samples each year and information about mental health (e.g., depression and stress). Then, we analyze spatial clustering of community mental health level and run a spatial regression model that includes variables of local physical and socioeconomic characteristics and public healthcare services. The empirical results show that spatial disparities in mental health are lower and population density and open space are more influential on community mental health level after the emergence of COVID-19.

Citations


Key Words: mental health, COVID-19, spatial disparity, resilience, pandemic

Track 9 Research in Motion (RiM)

MAPPING SOCIAL DETERMINANTS OF PEDIATRIC HEALTH: A STUDY IN GREATER BOSTON
Abstract ID: 1303
Individual Paper

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Good health is a function of good quality-of-life, which is contributed by physical and social environments. While the relationship between the physical environment factors (such as air pollution) and health is straightforward, the relationship between social factors and health is more complex (Davern et al., 2017). Past research has shown that racial health disparities are caused by inequities in social determinants of health—such as environment, housing, education, and employment, to name a few. Social determinants of health such as food insecurity, access to vaccinations, percentage of tree canopy and green areas in neighborhoods are indirect, yet powerful influences on health outcomes in various populations. For example, children in food insecure households have higher rates of chronic illnesses, poorer mental health, and frequent emergency room visits, compared to children from food-secure households (Pereira & Oliveira, 2020; Thomas et al., 2019). In the past two years, the pandemic has severely exacerbated an already unstable food supply chain, and children have been hit the hardest (Brochier et al., 2022).

This project focuses on understanding pattern in obesity and frequency of asthma related emergency room visits in developing children (2-12 years) and adolescents (12-16 years), through the lens of race, food insecurity, access to open or green space, and access to other social infrastructure. Thus far, the relationship between public health concerns and social indicators have been studied as discrete problems—that is each health issue has been studied separately. This project hypothesizes that the same set of social indicators may be responsible for several health outcomes in minority and disadvantaged children in urban areas.

The project merges and analyzes obesity and asthma data by school districts, food access indices data, and race data to arrive at conclusions. In the initial phase, the project will collect recorded data from credible sources (Census, State of Massachusetts, Metropolitan Area Planning Council [Boston Metropolitan Area Authority], etc.), and map the data using GIS methods. In the second step of the study, we will use spatial regression methods using R, to build a connection between racial neighborhood composition, health outcomes, and other indicators.
Preliminary results indicate that indeed, some common social variables affect both obesity and asthma in Black and Hispanic children, in the Greater Boston area. For example, children of color are at a higher risk for asthma related emergency room visits, or obesity complications, and are also less likely to have access to public open space compared to their White peers. Looking ahead, we will conduct deeper spatial and quantitative analysis to further understand the relationship between health and social / built indicators.

Citations


Key Words: Public health, Food insecurity, Race, Built environment

HOW DO LOCAL PUBLIC HEALTH GOVERNANCE SYSTEMS SHAPE ACTION ON URBAN HEALTH EQUITY?

Abstract ID: 87
Research in Motion (RiM)

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Amid three decades of international focus on healthy and equitable urban policy, the literature on healthy cities has proliferated. However, the broader governance configurations that shape action on urban health equity – which we term here local public health governance systems – remain under-conceptualized. To the extent that elements of local public health governance for urban health equity have been researched, they are discussed disparately across academic disciplines, with limited integration or overarching conceptualization among urban planning, political science, and public health. As a result, no comprehensive conceptual model exists that can guide analyses and comparisons of governance for urban health equity, enable scholars to build on each other’s work, and inform institutional design.

This study asks: How do local public health governance systems shape efforts to advance urban health equity? Drawing on the theoretical literature on urban governance, we assume that: 1) to understand urban health equity initiatives, one must look at and beyond municipal governments; 2) different models of governance exist across jurisdictions; and 3) these models privilege different governance principles. Accordingly, we use the term local public health governance systems to describe the different configurations of decision-making power, resources, collaboration, participation, and accountability among governments, private sector actors, civil society groups, and residents that shape action on public health (including health equity) in cities.

This paper presents a conceptual model outlining how local public health governance systems shape action on urban health equity in high-income countries. The model is based on a synthesis of the multidisciplinary literature examining how governance configurations are theorized or shown to shape urban health equity initiatives and a thematic mapping of the governance elements, pathways, and relationships identified in the synthesis. For example, the degree of government decentralization is a governance element that can shape urban health equity action; one pathway through which this can occur is by giving decision-making power to officials who can account for local realities, such as the needs of disadvantaged neighbourhoods; but this pathway depends on the relationship between decentralization and other governance elements, including the existence of accountability
mechanisms and community participation forums.

Our conceptual model will have the potential to be tested and adapted in different contexts and to inform models of equitable urban development in similar policy areas that require joint efforts to achieve collective goals. It will also be useful to planners and other municipal officials who are working to create health equity-promoting programs, policies, and governance systems.

Citations


Key Words: urban health equity, local governance

FARMERS MARKETS AND FOOD EQUITY IN RURAL COMMUNITIES

Abstract ID: 197

Research in Motion (RiM)

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Farmers Markets promote a sense of place and history, especially in rural and suburban landscapes. Their position in the community brings together a multitude of partners which can work together to help the market grow its food equity efforts. Not only do benefits’ programs at markets increase access to healthy, locally grown foods, but they also increase sales and diversify the income stream of vendors coming to sell. Many farmers markets in Wisconsin, especially in rural areas, have shared the same story: they ran an EBT/FoodShare program on a limited budget, until funding or resources ran out. Our survey of 15 market managers across Wisconsin in 2020 revealed that for a farmers market EBT/credit/debit program to be successful, it needs to include 1) financial support for markets to run a token system or for individual farmers to purchase their own EBT/credit/debit machines, and 2) incentive programs to use EBT/FoodShare, such as Double-Your-SNAP-Dollar.

Only 1 out of 6 Wisconsin adults consume the recommended five or more servings of fruits and vegetables (F&V) a day (DHS, 2021). Greater F&V intake is associated with many positive health outcomes (CDC, 2017; Kaur & Aeri, 2019), most notably reducing chronic health conditions (e.g., diabetes, cardiovascular diseases, obesity) that account for most of Wisconsin health costs (DHS). Increasing F&V intake by as little as 0.4 daily servings has been estimated to reduce national health care spending and lost economic productivity by billions of dollars while preventing millions of chronic illnesses and improving quality of life, (Ekwaru, et al, 2017; Lee, et al. 2019 ). F&V are the most frequently purchased type of food at farmers markets. Consumers who buy food at farmers markets purchase 1.5 times more F&V than people who buy food only at non-direct retailers (Economic Research Service, 2018).

While all Wisconsin residents would benefit from increasing their F&V intake (DHS, 2020), this is especially true for low-income populations (Pechey & Monsivais, 2016; Rehm, et al 2015). A two-year study in 10 Wisconsin farmers markets found that 99 percent of food assistance beneficiaries increased their F&V intake by shopping at the
farmers market (Krokowski, 2014). The presence of farmers markets and the ability to redeem SNAP at the farmers market directly increases F&V intake of SNAP recipients (Economic Research Service, 2018; Krokowski, 2014; Jones & Bhatia, 2011; Dimitri, et al. 2015; Buttenheim, et al, 2012). While these programs are resource intensive, preliminary research has shown that an investment in farmers markets can have an exponential impact on the economy (Ledesma et. al, 2021). For example, Farm 2 Facts (F2F) demonstrated a high percentage increase in SNAP sales in the Village of Brown Deer, WI, with the net percentage increase being over 500%, after their implementation of F2F.

This paper presents research from an ongoing USDA Local Food Promotion Program grant. The grant established a Central Wisconsin Farmers Market Collaborative (including Stevens Point, Marshfield, Wausau, Waupaca, Adams-Friendship, and Wisconsin Rapids) that studied how to support individual markets to:

1. ascertain the readiness of their communities to invest in EBT/credit/debit services at the market;
2. develop a business plan (in communities with sufficient readiness) to fund starting a new, or strengthen existing EBT/credit/debit services at the farmers market;
3. evaluate the economic and social impact of well-supported and sustained EBT/credit/debit services on market vendors and local businesses, SNAP-eligible residents (fruit and vegetable purchases, inclusion), and partner entities and residents generally; and
4. establish ongoing impact and needs assessment to ensure EBT/credit/debit programs are sustained while also evolving in response to local needs to ensure that the market is accessible to all community members, including low-income, minority and differently abled.

Citations


Key Words: EBT, food access, equity, farmers markets, USDA

TRAUMA-INFORMED PRACTICES IN URBAN PLANNING FOR IMMIGRANT INTEGRATION: LEARNING FROM HEALTH-RELATED DISCIPLINES

Abstract ID: 244
Research in Motion (RiM)

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Forced migration processes are rife with emotional distress and traumatic experiences. Many immigrants face conditions that trigger significant mental stress and disturbances before, during, and after migration. Some of those factors may have prompted their migration in the first place, such as when forcing people to flee civil strife, violence, or climate-induced disasters. Previous stressors may exacerbate, or others may become present, during migrants their migratory trajectories or after they arrive in host societies and face challenges during their integration processes. These sets of physical and emotional circumstances can lead to long-lasting impacts that can not only harm the individual but can cause inter-generational consequences affecting people’s mental, emotional, and behavioral health.

While health-related disciplines, including psychology and social work, have long traditions of trauma-informed practices, there is still not sufficient attention to their needs vis-à-vis migrant populations. Additionally, there are disciplines that impact immigrant integration where trauma-informed awareness is still nascent. Among them, urban planning has only recently started to pay attention to trauma-informed practices, and it has not yet done so about migrant populations.

The growing number of migrants in cities raises an alarming need and understudied opportunity to understand how trauma-informed practices can be adapted and adopted within urban planning. Yet, urban planning has only recently started to pay attention to trauma-informed practices, and it has not yet been done about migrant populations. In addition, despite urban planning’s opportunity to provide critical support to immigrant integration in host societies, insufficient literature, and planning precedents exist on the subject. We seek to understand how urban planning can adapt and adopt therapeutic approaches to better support and help migrants for their well-being.

Citations


Key Words: Trauma-Informed Practices, Immigrant Communities, Immigrant Integration, Migrant Populations, Refugees

WALKING CULTURE IN CHINA

Abstract ID: 411
Research in Motion (RiM)

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Background: Walking brings wide-ranging health benefits to individuals and increases social interaction (Hanson & Jones, 2015). Walking, as a sustainable transportation mode, may contribute to the urban environment by saving
transportation energy consumption and reducing vehicle emissions. Due to its potential significance, walking has been paid increasing attention in urban planning and public health research fields in the past two decades. Existing walking studies in urban planning mostly focus on evaluating walkability and exploring the correlations of walking activities with built-environmental features and individual characteristics (Day, 2016; Panter & Jones, 2010). However, the impact of culture on walking requires further research. Culture can be an underlying tacit reason for individuals to behave in specific ways. Together with biological equipment, social factor, and physical environment, culture is one of the determinants of human action including walking behavior (Kroeber & Kluckhohn, 1952).

Research Questions: This study poses two questions: 1) What are the characteristics of the culture of walking in China? and 2) How does culture influence walking behavior? Culture is defined as the shared values in a social group, with the core of culture being historically established (Shweder & Beldo, 2015).

Research Methods: A mixed-method research strategy is used to obtain a multi-perspective understanding and allow triangulation between results. The historical data were derived from Classical Chinese documents, while contemporary data were collected in Beijing. In-depth semi-structured interviews and questionnaires were used to gather data from 104 participants who were recruited using non-random sampling methods. GPS and Fitbit tracking data were also used to examine the consistency between reported and tracked walking behavior among 30 volunteers, a subgroup of the 104 participants. Data analysis methods include content analysis and critical discourse analysis, supplemented with descriptive statistics and regressions.

Findings: This study finds that walking has been advocated in Chinese culture in both ancient and Contemporary times. Contemporary Chinese people, taking Beijing as an example, commonly walk for physical health, mental health, communication, and to observe the city. This contributes to a culture that views walking as good. Residents in Beijing inherit the value that walking is good for physical health from traditional ideas, while contemporary culture influences individuals through education, peer influence, and other incentives. Individuals who hold strong positive values about walking are likely to spend much time walking for transport, leisure, or both. The more strongly they have these values, the more they can tolerate bad outside conditions. This article concludes that culture supports walking in China, and it influences individuals’ walking by transmitting positive values about walking.

Implications: Culture does influence walking behavior, thereby cultural strategies, such as long-term publicity and education, can be employed to strengthen positive walking values in China, and thus encourage walking in Chinese cities.

Citations


Key Words: walking, culture, health, values, active transport
THE RESILIENCE OF THE URBAN TOURISM LOCATIONS DURING COVID-19; A CASE OF SEOUL, SOUTH KOREA

Abstract ID: 500
Research in Motion (RiM)

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Tourism and hospitality industries have been hard hit by the COVID-19 pandemic. In 2020, the global number of international tourists dropped by a staggering 74% compared to the pre-pandemic year of 2019 (UNWTO, 2021). This has resulted in an unprecedented loss of tourism revenue, income, and jobs across the industry (UNWTO, 2020). The decline has been particularly severe in urban tourism, which refers to tourism activities that take place in urban areas. Major cities such as Paris, New York, London, Singapore, Barcelona, Milan, Tokyo, and Seoul have all experienced a significant drop in urban tourism.

The pandemic has forced people to find new ways to enjoy themselves while minimizing contact with others. Several studies have shown a decrease in people's willingness to engage in tourism and hospitality activities. One study found that strict public health interventions, such as stay-at-home orders or lockdowns, resulted in a 9.2% reduction in participation in these activities worldwide. However, outdoor activities have seen a significant increase, with more than a 200% rise in participation in urban naturalized areas and cultural landscapes compared to pre-pandemic levels. This highlights the importance of green infrastructure for city resilience. Large-scale surveys have also shown that the perceived risk of COVID-19 has led to a stronger preference for natural and disinfected places over crowded areas for leisure activities. During the pandemic, people have increased nature-related activities such as hiking and wildlife observation.

The impact of the pandemic on urban tourism spots has varied depending on their characteristics. Those with resources and programs that appeal to visitors during the pandemic may have fared better than those without. Additionally, these spots may recover more quickly than others. However, previous studies have only focused on the decline in urban tourism and have not fully explored its recovery. Furthermore, these studies have relied on descriptive statistics from data collected over discrete periods, such as before-and-after comparisons. As a result, they do not provide a direct and detailed understanding of people's daily behavioral reactions to the spread of COVID-19, while simultaneously controlling for all other influencing factors.

In this context, we aim to evaluate the resilience of urban tourism locations during the COVID-19 pandemic. Firstly, we will cluster time-series data of tourist volumes using machine learning techniques to identify their characteristics. Secondly, we will use spatial panel modeling to investigate how the characteristics of tourism spots, such as proximity to transportation facilities, universities and colleges, historic assets, green spaces, and land cover ratios of residential, commercial and mixed-use, influence visitor numbers. We will analyze two aspects of the pandemic: daily infections and the level of public restrictions. We hypothesize that updates on COVID-19 cases and public measures will affect recreational activity choices. People may avoid crowded places as the number of confirmed cases increases, which could benefit certain tourism locations with particular characteristics.

To our knowledge, this is the first study to assess the resilience of different types of tourism spots during the COVID-19 pandemic using big data on daily pedestrian movement and records from a public alert system. The study focuses on Seoul, South Korea, and covers the period from January 2019 to December 2021.

Support: Ministry of Education of the Republic of Korea and the National Research Foundation of Korea(2021S1A3A2A01087370), and Seoul National University (Creative-Pioneering Researchers Program).

Citations

PLANNING BEGINS WITH PEE: ENABLING NUTRIENT CYCLING TO SUPPORT CIRCULAR ECONOMIES, ACHIEVE ENVIRONMENTAL GOALS, AND STRENGTHEN REGIONAL FOOD SYSTEMS

Abstract ID: 1015
Research in Motion (RiM)

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When innovative, environmental actions are taken in liberal U.S. cities or progressive countries, too often the assumption is that such change could never happen in politically divided communities. We consider this assumption by examining the planning and regulatory changes needed to expand the use of “urine-derived fertilizer” (UDF), a waste recovery method being implemented in two cities in Vermont and multiple cities across Europe that could have wide ranging impacts for climate change, economic, food systems and infrastructure planning.

UDF is generated through a process that captures and recycles nutrients excreted by people, which are otherwise funneled into aging, costly, greenhouse gas-emitting wastewater treatment facilities. Especially when coupled with carbon-rich sources of composting – which itself reduces methane emissions by eliminating food waste from landfills – UDF can supply a stable source of limiting nutrients (e.g. nitrogen, phosphorus) to farms, helping to build soil carbon, and reduce nutrient runoff. The development of UDF supply chains also offers the potential to create circular economies, link urban and rural communities, and support regional food systems resilience, lowering farmer dependence on costly, energy-intensive synthetic fertilizers. UDF, in other words, disrupts the dominant, industrialized food system that relies on linear nutrient flows and creates numerous “externalities” fueling much of the climate crisis and water pollution.

As the second most diverse agricultural state in the U.S and long-standing political swing state, Michigan serves as an ideal location to carry out our exploratory case study (Yin 2013): a location where we can test hypotheses about the drivers and barriers to widespread UDF adoption. Drawing on the “Receptivity Framework” – a methodology used to examine factors affecting innovation adoption – we examine the network of supportive actors, institutions, and enabling policy that builds wider knowledge, legitimacy, infrastructure, and capacity to scale up an innovation (Roma et al. 2013). Our methods include interviews with state departments of environment and agriculture as well as agriculture extension agents, infrastructure planners, wastewater treatment managers, local health departments, and fertilizer manufacturers across a diverse sample of agricultural counties and rural-to-urban continua in MI. We also conducted a document review of infrastructure plans, climate neutrality and food systems plans, and biosolid, food safety, wastewater treatment, and other relevant regulations.

Our findings suggest a series of typologies of contexts that seem most likely to support or stall the development of UDF adoption and infrastructure, based on the extent to which local governments have synergistic carbon neutrality, food systems planning, and circular economy priorities. We also point to key regulatory factors that should be leveraged or changed to enable UDF adoption and infrastructure, as well as wider skill sets, urine
collection infrastructure investments, trust and awareness building, and capacity needed among urban and regional planners, farmers, wastewater treatment managers, and the wider public. Alongside wider insights about how to support policy transfer of innovative planning practices, our paper targets sites in MI where our larger research team plans to test design options and identifies advocacy strategies for scaling up UDF research and trials to a wider set of U.S. states.

Citations


Key Words: food systems planning, nutrient cycling, policy transfer, circular economy, environmental planning

PHYSICAL ACTIVITY AND PSYCHOLOGICAL WELLBEING OF U.S. COLLEGE STUDENTS: IMPACTS OF COVID-19 AND INSTITUTIONAL CHARACTERISTICS

Abstract ID: 1119

Research in Motion (RiM)

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Mental health issues among college/university students have become increasingly prominent in higher education, especially during the COVID-19 pandemic (Son et al., 2020). While previous studies have explored the impact of the pandemic on university students’ health, most have focused solely on individual experiences and socioeconomic factors, overlooking the broader institutional settings. School-level environmental factors have been shown to affect health-related outcomes and experiences (Bonell et al., 2013; Moylan et al., 2019), but empirical evidence on their specific roles is highly limited. This study investigates whether COVID-19 and institutional-level factors such as school size and location influence student health outcomes.

To understand the differences in the health-related outcomes across universities/colleges before (Fall 2019 & Spring 2020) and during the pandemic (Fall 2020 & Spring 2021), this study used the longitudinal cross-sectional survey data from the American College Health Association’s National College Health Assessment (ACHA-NCHA). Specifically, we examined the influence of both individual-level characteristics and institutional-level factors on students’ weekly physical activity (PAGUIDE: whether meet the US recommended guidelines for physical activity (PA) for adults) and psychological wellbeing (PWB: psychological wellbeing scores measured by the Diener
Flourishing Scale). Using data from 16,890 students from 13 institutions that provided valid survey data for both before and during COVID-19, multilevel regression models were estimated for each outcome. COVID-19 and institutional-level factors were treated as independent variables and demographic characteristics as control variables.

Results indicated that: 1) COVID-19 (Coef.= -3.70, p<0.01) significantly predicted the psychological wellbeing among students, with lower levels of psychological wellbeing observed during the pandemic; and 2) institutional-level factors, such as school locale, size, and type, were the significant predictors of both physical activity and psychological wellbeing outcomes. Compared to schools located in large towns, schools in large cities (OR=1.32, p<0.05) and small cities (OR=1.34, p<0.01) were more likely to meet the PA guidelines, whereas schools offering 4+ years of programs (OR=0.79, p<0.05) were less likely to meet the PA guidelines. Additionally, schools with larger student populations (Coef.= -1.05, p<0.01) tended to have lower levels of psychological wellbeing, while religiously-affiliated institutions (Coef.=1.37, p<0.01) tended to have better psychological well-being.

Overall, this study makes a valuable contribution to the existing knowledge on COVID-19 and students’ health in higher education. When designing programs and policies aimed at improving physical activity and mental health outcomes among students, institutions should take into account their size, location, and type. The results highlight the need for effective environmental and behavioral interventions and prevention strategies that are tailored to meet the specific needs of students in different institutional environments.

Citations


Key Words: Healthy University Planning, Covid-19 Pandemic, University Institutional Characteristics, Student Physical Activity and Wellbeing

MITIGATING HEALTH RISKS FROM HEAT WAVES IN SOUTH KOREA: AN EX-ANTE ECONOMIC EVALUATION OF ADAPTATION POLICIES WITH EQUITY CONSIDERATIONS

Abstract ID: 1149
Research in Motion (RIM)

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South Korea, like other countries in the world, is at risk of experiencing negative impacts on the health of its population due to climate change, particularly in relation to heat waves (Yang and Yoon 2020). These extreme weather events can worsen existing health problems and increase the incidence of new ones, disproportionately affecting vulnerable populations. While policy decision-making has traditionally prioritized efficiency over equity, there is growing recognition among researchers and policy decision makers of the need to consider equity as a key priority in developing adaptation policies (Dukhanin et al. 2018; Hammitt 2021; Ward et al. 2022). Despite this, quantitative analysis of regional- and national-level health-related adaptation policies, as well as distributional considerations, remains limited in South Korea due to the normative nature of economic evaluation and a lack of
In this study, we investigate the economic evaluation of adaptation policies to mitigate health-related risks associated with climate change, with a particular focus on their distributional impacts on vulnerable population in South Korea. Our objective is to quantify the benefits and costs of potential adaptation policies to mitigate health-related risks from more frequent heat waves and identify the most applicable decision-making methods for different vulnerable population groups. We utilize site-specific weather data from Korea Meteorological Administration and health data from National Health Insurance Service to assess the impacts of heat waves on health-related risks and estimate the potential reduction in mortality and morbidity resulting from various adaptation strategies.

The study involves the following steps: first, we identify the health-related risks associated with heat waves and define potential adaptation strategies through discussions with policy decision-makers and stakeholders. Second, we quantify the potential risk reduction associated with each policy using a national-level simulation that employs both the causal mediation approach and a two-stage modeling approach under future climate and socio-economic scenarios. Third, we identify vulnerable populations affected by heat waves by utilizing qualitative and quantitative information on health-related risks. Fourth, based on the simulated health outcomes, we identify benefits and costs and evaluate them for each strategy in monetary terms using traditional and distributional decision-making tools (e.g. equally-weighted cost benefit analysis, distributed-weighted cost benefit analysis, and multi-criteria decision analysis). Finally, we evaluate the trade-off between improving total health with minimum costs (i.e. efficiency) and other equity objectives among the different adaptation policies. Additionally, we conduct a sensitivity analysis to examine how the trade-off is affected by changes in important parameters. Based on our results, we discuss the factors that should be taken into account for the further development and implementation of adaptation strategies in South Korea.

The empirical findings in this study provide a better understanding of how a single country could be adapted to health-related risks by changing climate, including analysis of how distributional considerations could affect health outcomes by its adaptation efforts. While previous studies have focused on the project which may only include specific vulnerable populations or characterized adaptation strategies at a global level (Nurmi and Ahtiainen 2018), our research provides a quantitative evaluation of equity impacts of how adaptation policies affect different population groups within a single country. Our regional-level predictions on distributional impacts of potential health-related adaptations allow us to assess whether there are systematic health risks across different locations, occupations, generations, or genders. Additionally, our approach enhances the understanding of which economic methods are most relevant to different groups to evaluate health outcomes from heat waves.

Citations

JUST RECOVERY AND SUSTAINABLE FUTURES: ENACTING THE RIGHT TO STAY THROUGH NETWORKS OF CARE IN RURAL PUERTO RICO

Abstract ID: 1250
Research in Motion (RiM)

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When Category 4 Hurricane Maria hit Puerto Rico in 2017, communities all over Puerto Rico were already experiencing increasing precarity. Political, financial, and environmental crises have exacerbated massive outmigration over the past ten years. Such events exacerbate already existing inequities, leaving the most marginalized populations, such as the rural, the low-income, and dwellers without land or property title, in a state of extreme vulnerability (Cutter et al. 2003, Molinari 2018). All of this has made community-organizing and community-led planning important avenues through which people are asserting their right to stay in place and their right to contribute to their vision of a just future on the archipelago. Throughout the islands, community organizers, some with previous activism experience, set up various Centros de Apoyo Mutuo (CAM) or mutual support centers (Vélez-Vélez & Villarrubia-Mendoza, 2008) most of them squatting in abandoned school buildings (Villarrubia-Mendoza & Vélez-Vélez, 2020). Some of these initiatives are in the center and mountainous areas of the island, which were extremely challenging municipalities to reach after Hurricane Maria. After more than five years, these centers continue to work and serve communities in different ways that span from meeting basic needs, providing health clinics, to agricultural support for coffee farmers, to summer youth camps, and even support in land tenure processes.

In this initial research stage I am asking, what are the visions of sustainable futures that the communities are putting forward, and how do they envision getting there? I will draw from unstructured interviews and from my own experience visiting these sites to present preliminary ideas about the role that these centers are playing in the health and wellbeing of people in rural areas that lack social and environmental planning support. I will also consider how place-attachment, sense of belonging and participation in networks of care, affect wellbeing under conditions of high vulnerability.

Lessons from this project could inform the environmental planning and disaster mitigation area, which has yet to develop more culturally appropriate and place-based responses to social vulnerability and climate change issues that are becoming increasingly common.

Citations

- Reese, Ashanté. 2017. “‘We Will Not Perish; We’re Going to Keep Flourishing’: Race, Food Access, and Geographies of Self-Reliance.” 50 (2): 407-424.

Key Words: grassroots, rural, wellbeing, justice, recovery
EFFECT OF URBAN PARKS ON THE PHYSICAL AND MENTAL HEALTH OF VISITORS

Abstract ID: 1268
Research in Motion (RiM)

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Globally, urban areas have faced the challenge of significant levels of population density. The proportion of urban population, which was about 55% in 2020, is expected to increase to 68% by 2050 (United Nations Human Settlements Programme, 2022). To accommodate this rising demand in cities, high-density developments have been implemented. However, this leads to environmental pollution, scarcity of outdoor spaces, and the disease outbreaks. In reaction to such condition, urban parks have attracted attention in urban planning. Urban parks satisfy the demand for outdoor spaces and offer venues for physical activity and community engagement to increase physical and mental health status.

Most of the relevant studies have analyzed the effect of urban parks on health status by conducting surveys and field research. They suggested that physical activities within urban parks contribute to improving health status of citizens (Hunter et al., 2019). In addition, they revealed that factors, such as water body, greenspace dispersion, accessibility, take a crucial role in enhancing health status of visitors (Xie et al., 2019; Ha et al., 2022). Surveys and field research provide the advantage of collecting detailed data on individual urban parks, including facilities, vegetation, and landscape; however, they rely on the subjective responses of participants, thus posing challenges in generalizing the research findings. Limited number of studies used statistical data to evaluate the effect of urban parks in terms of accessibility (Plunz et al., 2019).

Against this backdrop, we investigate the effect of urban parks on health status of citizens, using K-means clustering and multiple linear regression with park visiting as a mediator. The study site is the urban parks located in Seoul, South Korea and the study period is March 1, 2018, to February 28, 2020. We collected health status data, including body mass index (BMI) and number of patients who have depression disorder provided by Korea Disease Control and Prevention Agency (KDCA). The other data we used for statistical analysis are related with park characteristics, spatial characteristics, and socio characteristics. Park characteristics represent individual or district-level attributes of urban parks, such as area, density, and attractiveness. Spatial characteristics include facilities and locations except urban parks that may impact health promotion, such as mountain, sports facility, and hospital. Socio characteristics are information about the district where the urban park is located, reflecting factors like population, income, and occupation.

The statistical analysis consists of two stages. We aim to categorize types of urban parks, using k-means clustering, based on factors such as area, accessibility, and maintenance status. Next, using multiple linear regression, we evaluate the effect of urban parks on health. To integrate park visiting into statistical model, we hypothesize that an increase in the attractiveness of urban parks will lead to higher visiting and employ instrumental variable for a quantitative assessment of attractiveness.

Our study contributes to the academic literature in several respects. First, by using statistical data, we conduct a quantitative evaluation of the effects of urban parks while minimizing bias. Second, we employ an urban park classification that reflects actual conditions rather than administrative divisions, thereby enabling evaluations using the same criteria across different regions. As the importance of urban parks from a healing perspective is being emphasized, we expect that empirical study of the effect of urban parks on health status could support local government policies related to urban park management and development.

Citations
BUILT ENVIRONMENT, TRANSIT USE, AND PHYSICAL ACTIVITY: EXPLORING THEIR RELATIONSHIPS IN A PREDOMINANTLY HISPANIC COMMUNITY ALONG THE US-MEXICO BORDER

Abstract ID: 1315
Research in Motion (RiM)

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Background: Physical inactivity continues to be a major public health threat in the US. Automobile dependency is another major challenge facing our society that has caused many environmental problems. Such health and environmental burdens are not equally distributed across populations and places. Public transit can contribute to both issues as an active, equitable, and environmentally-friendly mode of transportation. Despite its many benefits, transit remains an underutilized mode of transportation in the US constituting only about 5% of the commuting mode share (Burrows et al. 2021). Better understanding its health-significant roles as a means of engaging in daily physical activity can facilitate interdisciplinary research and intersectoral collaborations needed to make transit a more viable option both as a travel mode and as a form of physical activity.

Objectives: Focusing on a predominantly Hispanic community along the US-Mexico Border, this study first asks who are more likely to use transit and if any of the modifiable built environmental factors play a role. It then further explores the pathways among environmental factors, transit use, and physical activity. Using the rich 7-day objective data on physical activity captured from a NIH-funded study, this study aims to address the health and mobility challenges facing this underserved population and discuss potential intervention strategies to promote transit use and physical activity.

Methods: This study used the survey and accelerometer-measured physical activity data from 841 adults living in El Paso, Texas. It focuses on two outcome variables: transit use (the odds of using transit at least once a week) and physical activity (weekly minutes of moderate-to-vigorous intensity activities). A logit model was used to first identify significant predictors of transit use. A simultaneous equations model (SEM) was then used to further analyze the relationships between transit use and physical activity, and the roles of the built environment for the two outcomes.

Results: The logit model showed that transit users were more likely to be male, employed, and from low-income (<$20,000/year) households, and have fewer cars in the household. Among the environmental variables, living closer to the transit stop, both as an objective measure (GIS-based street network distance to the closest bus stop,
p=0.045) and perceived measure (perceived ease of walking to the bus stop, p=0.003), was associated with increased odds of using transit. Having crosswalks or pedestrian signals (p=0.031) was also positively associated with transit use. The self-selection proxy measure was also significant (p<0.001).

The SEM results further showed that the predicted transit use variable was a significant contributor to physical activity (p=0.001). Physical activity was also explained by a number of personal factors including age, gender, race/ethnicity, employment status, living with children, and perceived barriers (e.g. lack of energy, fear of falling, lack of company). From the built environmental factors, presence of sidewalks in the neighborhood (p=0.014) was associated with increased physical activity. In terms of the types and locations of physical activity, active individuals were more likely to engage in gardening and use parks, trails, and natural green spaces for their activities, than their counterparts.

Implications: The contributions of this study include (a) the focus on underserved communities, (b) use of objective measures, (c) consideration of self-selection issues, (d) simultaneous modeling of both transit use and physical activity outcomes, and (e) new/additional information about the health significant roles of transit use and the built environment. Continued efforts are needed to address the supply and demand of transit service, with transportation equity in mind. Intervention efforts should target readily modifiable factors present in the current community environment and be tailored for the specific needs of the local communities and populations.

Funding: National Institutes of Health (R01CA228921)

Citations


Key Words: Transit, Physical Activity, Public Health, Built Environment

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**TEMPERATURE EFFECTS ON ROAD TRAFFIC INJURIES IN KAOSHIUNG, A TROPICAL CITY IN TAIWAN**

Abstract ID: 81

Poster

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Road traffic injuries (RTIs) are a significant public health issue causing a considerable number of deaths and injuries worldwide. Weather factors, such as temperature, can influence driver performance and vigilance, and thus, contribute to RTIs. This is concerning in the era of climate change where many locations increasingly see record-breaking high temperatures. However, there is a paucity of empirical data on the impact of temperature on road safety in a warmer setting like a tropical location. This research aims to examine the temperature effects on RTIs in Kaohsiung, a tropical city in Taiwan.
Taiwan has experienced a warming trend over the past 110 years, with the average annual temperature increasing by 1.6°C. Heat-related hospital admissions and emergency visits increase during Taiwan’s warm seasons. When above 36 °C, a 1 °C increase would increase heat health risks by 5% in Taiwan. These health risks could in part result from Taiwan's motorcycle-dominant traffic because motorcycle users have direct, immediate exposure to the external road environment. This is particularly concerning for Kaohsiung, which is the hottest city in Taiwan and has the most motorcycle-dominant traffic around the world, with its road environment being described as a "furnace" due to the high amount of waste gas and heat from vehicles.

Daily meteorological and RTI data between 2018 to 2021 from governmental public sources were collected. Meteorological data include daily mean and maximum temperature (°C) as the predictor variable of interest and other meteorological factors, such as relative humidity and wind speed, as control variables. For each data point, I also derived time-series variables, including day of week, month, and day of year. We also added a variable indicating whether the day is in summer months (i.e., June, July, and August) or not.

Since RTIs are rare events and the temperature effects on RTIs can be non-linear and time-lagged, I performed the Poisson distributed lag non-linear models (DLNM), where the dependency is estimated using smooth non-linear functions for bi-dimensional spaces of both predictor variable and lag dimensions, often described as cross-basis. This modeling framework is the paradigmatic method increasingly employed in the recent relevant work. In the model, I built a cross-basis function, cbt, which generates the basis matrices to simultaneously account for exposure-response and lag-response to model the relationship between temperatures and RTIs. In ctb, I specified a four-knot natural cubic spline function with df=5 to estimate the non-linear effects of temperature over time, and included lagged effects up to 7 days after exposure. I calculated the RRs with 95% confidence intervals of the effects of specific temperatures on daily RTIs with respect to the reference temperatures corresponding to the minimum number of RTI cases. The DLNM models will be stratified by those RTIs involving motorcycles and those involving cars to examine the differential weather effects between modes of transportation.

Current findings show a U-shaped relative risk (RR) curve, with RRs associated with high temperatures (>26°C) significantly greater than 1 and extremely high temperatures (>33.5°C) doubling the RRs, suggesting negative impacts of heat on RTIs. Furthermore, these effects can last two days after exposure. These RRs are significantly larger than those observed in other studies focusing on non-tropical locations. Further work will examine the differential effects of heat between motorcycle users and car users.

This research provides empirical evidence on temperature effects on RTI in a tropical context and has important implications for real-world policy concerning heat and traffic safety management in the face of climate change. For example, public transit incentive programs should be initiated when heat exposure reaches certain levels, and heat warning systems should be deployed to detect health-threatening temperature thresholds.

Citations

- Theofilatos, A., & Yannis, G. (2014). A review of the effect of traffic and weather characteristics on road safety. Accident Analysis & Prevention, 72, 244-256.
AGE-PLAYFUL PLANNING: ASSESSING OLDER ADULT PLAY ENVIRONMENTS

Abstract ID: 191
Poster

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Age-friendly communities have emerged as an important place-based concept in response to the ongoing demographic shift towards a more aged society. Age-friendly planning guides the development of enabling environments by minimizing the risks associated with aging. While preventative measures are important, built and social environments could be developed to optimize opportunities for older adult wellbeing, not only to minimize risk. Age-friendly planning can expand to proactively embrace positive measures, including the notion of play. However, almost no research to date has focused on planning for older adult play. We contribute to this new area of planning research by conducting a naturalistic observational study of older adult play guided by two overarching research questions: How do older adults play in public space? And how can planning and design support and encourage older adult play in public space?

Drawing upon the extensive children’s play literature, we developed the Study of Older Adult Play Spaces (SOAPS) observation tool to assess the environmental quality and attributes of public space for supporting older adult play. The SOAPS observation tool documents nine components related to older adult play: play space, active participant, gender, age, mobility, play type 1, play type 2, social interaction level, physical activity level, and environment interaction. The associated systematic observation protocol also includes for pre-tool and post-tool reflections.

The SOAPS tool was used to conduct naturalistic observations of older adult play in Century Village East, an older adult age-restricted community in Deerfield Beach, Florida. Three play spaces (a pool, a multi-use path, and tennis and pickleball courts) were each observed three times at different points in the day in February 2023.

Our findings show that the tennis and pickleball courts were well used, fostered high levels of cooperative social interaction, and encouraged physical activity. However, the courts offered very little to anyone but the players. The courts were not a place of social congregation. Moreover, the sports they host require specific gear to play, making impromptu play impossible. In contrast, the path was found to be very versatile as it does not specifically dictate use. However, the path was not a place to congregate. The individualistic and parallel nature of the play observed at the path may be less likely to nurture converging social interaction, curtailing the potential of unplanned or unexpected play. In terms of capacity to spark unrealized play, the pool area had the most potential. The pool, and even more so the play space surrounding the pool, was an ideal place to linger, to socialize, and to connect with known and new acquaintances. It provided dedicated space for formal physically vigorous play (swimming) but also offered many adaptable alternatives. However, play observed at the pool was quite often passive, unoccupied, and sedentary. While the space was inviting to a range of users, it did not cultivate a wide range of uses. Finally, none of the play spaces fostered creative types of play.

Play spaces that have opportunity for structured, cooperative, rule-based play with surrounding or overlapping space that is flexible and allows users to adapt it to their own desires provides versatility and specificity. Integrating these overarching design principles allows space for creativity and bespoke focused use, sedentary and vigorous physical activity, individualized and group socialization, and impromptu as well as organized activity. By planning and designing play spaces to support a wide range of playful activities for a wide range of older adults, play spaces can become an important part of age-friendly planning and play a pivotal role in supporting the physical, social, and mental wellbeing of older adults.

Citations

Key Words: age-friendly planning, play, observation, Florida

GREENER THE SAFER? EFFECTS OF URBAN GREEN ON COMMUNITY SAFETY AND PERCEPTION OF SAFETY USING SATELLITE AND STREET VIEW IMAGERY DATA

Abstract ID: 968
Poster

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Green space has received attention for its potential association with crimes, particularly street crimes (Bogar & Beyer, 2016; Kondo et al., 2017), despite the widely recognized importance for fostering social interactions and promoting public health (Groenewegen et al., 2006; Kuo & Sullivan, 2001). The relationship between green space and crime risk has been widely discussed within Environmental Criminology, but these findings are yet to be conclusive. Additionally, the knowledge is scarce on how green space could affect people’s perception of safety (Lis et al., 2021) especially with consideration of neighborhood socioeconomic status.

This study uses advanced data instruments and machine-learning analytical methods based on Satellite Green Imagery Data from NASA NDVI and Google Street View imagery data for Houston, TX (2019). We first construct a fine-scale urban green index and a subjective measurement of people’s perception of safety. Then, we calculate the neighborhood Disadvantage Index based on Principal Component Analysis based on socioeconomic factors identified in the existing literature. The results of the Geographically Weighted Regression model show that urban green space is significantly associated with less street crime when controlling other factors. We also find that green space is significantly associated with a stronger perception of safety. These findings suggest that urban green space not only contribute to community safety but will also promote the sense of safety within public spaces.

Citations


Key Words: neighborhood safety, urban green, NDVI, perception of safety, social disadvantage
ACSP NEW TEACHING MODELS & PRACTICES TASK FORCE UPDATE
Abstract ID: 628
Roundtable

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In the post-pandemic landscape, institutions of higher learning have recognized that traditional graduate degree programs with rigid residence requirements can limit access to graduate education for working professionals, adult learners, and other non-traditional students. For example, a student enrolled in a traditional accredited Master in Urban Planning program is required to make a two-year full-time commitment to graduate study.

The ACSP Task Force on New Teaching Models and Practices will:

Conduct a focused scan of the higher education landscape of accredited graduate programs in planning and public affairs to identify innovative approaches that programs, departments and schools are using to increase access and inclusivity.

Examples of innovative approaches can include but are not limited to:

1. Non-accredited master’s degrees of shorter length
2. Graduate certificate programs that can be stacked to get a non-accredited master’s degree
3. Micro credentials and badges that can prepare students to be work-ready before they receive a master’s degree
4. Online classes offered asynchronously (classes can be taken anytime, anywhere)
5. Part-time and/or evening options

Develop and administer a survey of accredited planning programs and candidate programs to assess what approaches are currently being used and what approaches are proposed in the future
Present findings through a workshop/panel discussion at the ACSP Miami conference
Provide recommendations to ACSP leadership about how best to shape PAB standards - for the next standards revision.

This roundtable will present the initial findings of the task force work, reserving most of the time for a robust discussion by participants about their experiences with alternatives paths to planning education. We strongly encourage faculty at all ranks, as well as current students, to attend.

Citations
PERFORMING PUBLIC PARTICIPATION: HOW THE CLASSROOM CAN BE A PORTAL FOR PRACTICAL INNOVATION
Abstract ID: 931
Roundtable

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HOLMES, Tisha [Florida State University] ttholmes@fsu.edu, participant
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Over the last fifty years, public participation has transformed the profession and practice of planning. Engaging the public is now a keystone skill for professional planners that is taught in many planning schools around the world (Greenlee et al., 2015; Shipley & Utz, 2012). As educators, we often try to use the space of our classrooms to make the case for the transformative potential of participatory planning for our students. Yet, the skills we are trying to teach are increasingly devalued, with many of our students entering workplaces where participation is viewed as onerous, time-consuming, and unproductive. Engaging the public is viewed as part of the process to “get through” and quickly, rather than being the foundation of a collective, community-led planning endeavor. The result has been the codification of a set of practices that are packaged and sold as a toolbox, complete with a new set of professional credentials. The more ‘toolbox’ approach to public participation that is promoted by professional bodies like the International Association for Public Participation (IAP2) and the American Planning Association (APA) is increasingly influential and has the potential to limit participatory planning processes to an exercise in public relations and marketing. This professionalization (Barry & Legacy, 2023) and depoliticization of engagement skills have led many researchers to question whether participatory planning was performing the way it was intended or had become performative.

These concerns are even more pressing given that the practice of participation is rapidly changing. Planning agencies not only rapidly pivoted to online participation – implementing new technologies with a variety of challenges and consequences (Milz and Gervich, 2021) – but also grappled with how Black Lives Matter and struggles for Indigenous justice laid bare the deep structural inequities that are produced and reproduced through planning decisions. A tension emerges in the pursuit of ethical, effective, and efficient action between a need for urgency in the face of the many intersecting challenges of our time, and a need to slow down in order to build sustained relationships. With new technologies replacing more time-intensive forms of engagement and accelerating the pace of projects, public participation faces more obstacles than ever before.
This roundtable discussion builds on conversations from last year’s ACSP conference in Toronto, where a group of 24 scholars came together to discuss, among other things, how to revamp teaching practices to transform participatory planning. Our five panelists (including two of the organizers of last year’s workshop) teach public participation in diverse contexts including large classes of undergraduate students, small classes of graduate students, interdisciplinary groups, and students with varying levels of work experience. Their approaches to teaching public participation also express different ways of negotiating the political and theoretical commitments to both the formal (“invited”) and informal (“invented”) spaces of participation (Miraftab, 2009). The panelists will reflect on the tensions that emerge when presenting ‘toolbox’ approaches and will respond to the question: How can we prepare our students for the realities of the workplace while also emphasizing the potential of participation and relationship-building for transformative social change?

Citations


Key Words: public participation, pedagogy, tools, transformative change

STRATEGIC POSITIONING OF URBAN PLANNING PROGRAMS TO SCHOOL AND UNIVERSITY LEADERSHIP: PERSPECTIVES FROM PLANNER DEANS

Abstract ID: 986

Roundtable

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Urban planning programs are often the most innovative units on campus in terms of advancing community engaged research. Their research is often highly relevant to community and policy issues. Their curricula and pedagogies are routinely connected to community and policy issues and include connections to external organizations. They offer “real world” experiences for students and their faculty often hold relationships and capacity for connecting with a wide range of stakeholders. Planning programs are also often well ahead of peer programs and disciplines in advancing research and teaching that is engaged with issues of diversity, equity, and inclusion. Yet, these innovations in research and teaching, as well as external connections and impacts are not often on the radar of school and university leadership.

Planning programs and planning leaders have an incredible opportunity to grow not just their visibility, but also their impacts and resources, as universities are increasingly asked to further demonstrate their positive impacts outside of academia and the relevance of their work in the real world. Planning programs have long been doing the
things that universities and academic administrators are just recently starting to pay attention to. Drawing on the experience of urban planning faculty currently serving as Deans, the roundtable will share insights for urban planning program faculty and leadership on how to strategically position the work of planning within the higher education context.

Roundtable participants will share insights on how to build relationships with Deans and other university senior leadership. They will share recommendations for storytelling and communication about urban planning innovation that connects to important trends in higher education. Participants will offer perspectives on how to align the work of urban planning programs with school and university strategic priorities. The Deans will also share their insights on the prospective role and impact that planning programs, planning faculty, and planning leaders can have on shaping university priorities and narratives in ways that grow not only impact, but potentially resources. The facilitator will ensure that participating Deans highlight relevant contextual factors as they share their insights, helping attendees to think strategically about tactics that will work best in their own organizational environment.

The roundtable will include ample time for attendee engagement in the discussion. Attendees will be invited to share questions and their own experiences.

Citations

- Jones, P. 2018. The case for inclusion of international planning studios in contemporary urban planning pedagogy. Sustainability 11(15).

Key Words: Leadership, Pedagogy, Engagement

LEARNING TO HAVE DIFFICULT CONVERSATIONS IN A DIVIDED GLOBAL CONTEXT

Abstract ID: 1071
Roundtable

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Racism, classism, COVID-19, and global geopolitical conflict, and the growing internationalization of planning students and curricular content have combined to create a complex landscape within planning programs. For faculty, these social divisions among faculty, within the classroom, and within departments can be both personal
and professional. Many do not know how to have difficult conversations with each other and with students in ways that are effective, opening, safe, not hurtful and argumentative, and ultimately reparative and productive. If it is difficult for American faculty to talk about American conflicts, it is that much more difficult for international and American faculty to speak to domestic and international forms of social divisions within the classroom, among faculty, and in the diverse global professional contexts that graduates will encounter.

It has long been established that urban planning education and research need a global perspective. The growing numbers of international students, particularly from East and South Asia, have further accentuated the need to assess how much international content to teach within curricula, how to address racism, xenophobia, and cultural competency among students and faculty, and how to support international students in being effective, reflexive practitioners when they return home given local manifestations of social divides. The Association of Collegiate Schools of Planning (ACSP) and its members have taken initiatives to improve global planning education. Recent examples are the report from the ACSP Task Force on Global Planning Education (Carolini, et al, 2019) and the JPER (Journal of Planning Education and Research) article by the ACSP Planning Global Planning Education Committee (Fan, et al, 2022). The ACSP Committee on Diversity also discussed the experiences of students and faculty of different national origins at the ACSP Administrators Conference in March 2023.

However, a significant gap remains in our ability to meet the needs of international students or what social divides mean for them. ACSP’s studies have revealed structural and implicit barriers faced by international students, inadequate social or institutional support, and limited international content in classes. Most of our pedagogical research, especially on racial and social divides, still focuses on domestic issues (Rahko, 2021). Most of our DEIJ debates focus on American racial divides, especially among Black and White races, to the exclusion of many other forms of racial tensions within and among domestic and international settings. COVID-19 and international conflict and geopolitics have further complicated racial and immigrant dynamics within planning classes, programs, conferences, and public fora. Only a few recent studies on planning pedagogy are examining the experiences of international students alongside domestic ones (Lee et al., 2020), as well as the experiences of international students after they graduate and return home to work (Shi & Chiu-Shee, 2023, for students from mainland China).

We therefore propose a roundtable to provide a space for faculty to explore the challenges and to expand the global planning education focus to include improving faculty education practices. Such an expansion will not only address some needs of international students but also improve overall civic engagement among domestic students, international students, and faculty, all of whom have diverse backgrounds, experiences, and opinions. The discussions will center on the following three questions.

1. How to raise awareness of the needs for difficult conversations in our teaching and advising against the backdrop of a divided global landscape?
2. How do we teach international students to reflect on and respond to the effect of social divisions on planning practice in their home countries?
3. What pedagogical tools and resources are available to planning faculty to navigate these difficult conversations?

Citations

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https://doi.org/10.1177/0739456X221148197

Key Words: Global planning education, teaching and advising, international students, racism, xenophobia

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**Track 10 Professional Development Workshops**

**VIDEO PRODUCTION FOR SCHOLARS: HOW TO REACH A WIDER AUDIENCE WITH YOUR RESEARCH**

Abstract ID: 54
Professional Development Workshop

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City planning research is intended, in part, to provide knowledge to help planning practitioners, decision makers, and the general public make informed urban policy choices. Many of the people in those groups do not read academic journals on a regular basis. Conversely, 1.7 billion people visit YouTube monthly, making it the second-most visited website on the internet. YouTube videos can be easily shared and embedded, allowing the videos to be viewed even by those who are not regular YouTube viewers. Online video can convey nuanced information in a visual, engaging format and reach an audience of thousands or millions of viewers.

Producing an online video can be daunting, as it requires more technical expertise than writing a press release or blog post. Fortunately, it does not take a Hollywood budget or years of experience to produce a good online video. In fact, you likely already have the skills necessary to produce the most important part of the video: the script.

This professional development workshop will take you through the process of taking a journal article or professional report and transforming it into a video for general consumption. Participants will learn the basics of the entire process, including: converting an article into a brief script, filming, recording audio, finding or creating visuals, editing, and posting to YouTube. At the end of the 90 minutes, participants will understand the process and have a framework they can take and apply to their own research projects. The workshop instructor, a YouTube content creator and assistant professor, will use their years of experience to demonstrate the process step by step. The editing demonstration will use Adobe Premiere Pro software, as it is often readily available to academics and cross platform (Windows and Mac).

**Workshop schedule**

- Instructor and workshop introduction (5 minutes)
- Drafting a captivating script (20 minutes)
- Answering the technical questions—how to film yourself and record audio (20 minutes)
- Finding or producing images and videos to illustrate your ideas (10 minutes)
- Piecing it all together—using editing software to assemble the video (20 minutes)
- YouTube tips and tricks—how to get your video seen by more people (10 minutes)
- Q&A (5 minutes)

Workshop outcomes

1. Understand the process of producing a video based on scholarly research, from writing to editing and posting.
2. Identify the tools necessary to produce a video, including cameras, microphones, and editing software
3. Know where to find additional information about video editing

Citations


Key Words: Video, Communication, Workshop

TEACH-IN FOR TEACHING CLIMATE CHANGE

Abstract ID: 666
Professional Development Workshop

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The American Planning Accreditation Board now requires all accredited planning schools to teach about climate change. Specifically, they are responsible for teaching Sustainability and Climate Change in ways that show the “environmental, economic, and social/political factors that contribute to sustainable communities, reduce the impacts of climate change, and create sustainable, equitable, and climate-adapted futures.” Housing, transportation, economic development, environment, land use, urban design, infrastructure, and municipal finance—all these sectors and mechanisms will be affected by and are necessary for addressing climate change. Professionals working in a context of climate change and responding to climate needs and impacts also require diverse technical, communications, psychological, and engagement skills, as appropriate for their geography (ASAP, n.d.; Greenlee et al., 2015). It is therefore essential that a wide array of classes consider how their methods, strategies, and policies will be impacted by climate change and societal responses.

However, teaching on climate change is uneven within and across schools and not all faculty are prepared to teach
on this topic, either as part of a broader course or as a specialized course (Hamin & Marucci, 2013; Hurlimann et al., 2020; Lyles & Stevens, 2019). Others may already be teaching climate topics but are interested in updating or revising their content. Building the capacity of early career scholars from diverse planning subfields can be especially important for mainstreaming climate change across the curriculum.

This Professional Development Workshop, organized by the ACSP Task Force on Climate Change, provides an opportunity for interested faculty and junior scholars to hear from faculty who are teaching climate change modules and courses. In the first hour of the workshop, the following faculty will briefly (5 min) share their courses’ goals, structures, climate content, and pedagogical approaches. A moderated discussion following these presentations will ask faculty to reflect on the challenges they have faced in teaching these courses and how these courses have evolved over time. Copies of course and module syllabi will be made available on the ACSP climate syllabi repository ahead of the conference. At the time of abstract submission, the following faculty have confirmed their participation:

Donovan Finn: “Climate Science for Planning” module in the course Sustainable Planning and Development
Monica Haddad: Social Justice and Planning, and Climate Action Plan Studio
David Hsu: Urban Energy Systems and Policy
Ward Lyles: Planning for Climate Change and Disasters
Nidhi Subramanyam: Environmental Planning in a Changing Climate
Hannah Teicher: Planning Sustainable Built Environments

In the final half-hour of the workshop, the presenting faculty will break into pairs (by topic and/or course format) for “open office hours” and participants will have a chance to join and circulate among these small groups. Conversations can exchange teaching content and strategies, help participants work through how they might incorporate a topic into their course, or troubleshoot challenges in teaching climate change. Participants will leave the session having learned about cutting edge climate topics and pedagogies, and strengthened the community of practice among those teaching climate change now and into the future.

Citations


Key Words: pedagogy, climate change, adaptation, mitigation, resilience

BUILDING UNIVERSITY CAPACITY FOR TRANSFORMATIVE CLIMATE RESEARCH AND TEACHING
Abstract ID: 1163
Professional Development Workshop
Many universities have long had climate centers that focused on climate and atmospheric modeling. However, as society increasingly recognizes the imperative for climate action under a complex and deeply uncertain future (Folke, 2016), some universities have begun to organize institutional arrangements that support interdisciplinary, applied, action-oriented, and engaged research and teaching. These initiatives create new spaces within the academy to pilot and model the kind of transformative collaboration that planning scholars have been advocating is necessary out in the real world (Goodrich et al., 2020; Shi and Moser, 2020).

This Professional Development Workshop, organized by the ACSP Climate Change Task Force, provides an opportunity to hear from the experiences of a selection of climate initiatives, consider how institutional design affects projects and impacts, and debate whether and how to scale up from their early experiments. In convening this workshop, the Task Force aims to build connections among those who have been grappling with the organizational challenges of launching new initiatives. It also invites conversation among faculty and early career scholars who are contemplating proposing such efforts in the future as to how best to proceed.

In the first half of the workshop, faculty who lead or are directly involved in their schools’ climate-relevant initiatives will briefly (5 min) share their organizational structure, mission, and projects. At the time of abstract submission, the following faculty are confirmed to participate in the session. The listed initiatives represent diverse scopes and organizational arrangements. Some are networks among schools, some are based within a single school, and some focus on developing relationships between universities and their surrounding communities. Some focus more on the natural sciences, some on research, some on design and implementation. Reflecting this, the names of these initiatives include labs, academies, institutes, and centers.

Carolyn Cox, University of Florida: Florida Climate Institute
Jeff Carney, University of Florida: Florida Institute on the Built Environment and Resilience and Jules Bruck, University of Florida: School of Landscape Architecture and Planning
Katharine Mach, University of Miami: Climate Resilience Academy
Amy Clement, University of Miami, and Tiffany Troxler, Florida International University: Resilient 305 Collaborative (in Southeast Florida)
Isabelle Anguelovski, Universitat Autònoma de Barcelona: Barcelona Laboratory for Urban Environmental Justice and Sustainability
Katherine Lieberknecht, University of Texas at Austin: Planet Texas 2050
Damian Pitt, Virginia Commonwealth University: Institute for Sustainable Energy and Environment
Jan Whittington, University of Washington: Four climate labs and a Climate Certificate Program

Presenters will then break out into different small groups with attendees to reflect on the following questions:

- What is the role of urban planning departments in these arrangements? How have these novel arrangements changed how climate research and teaching take place on campus and beyond? What gaps remain in what topics are included or which methods are used?
- How might planning programs with fewer faculty and limited university support and resources organize to address climate change in intersectional ways? How have these schools and programs already found ways to be interdisciplinary, innovative, and effective given constraints?
- How can we better center climate justice and equity in these new institutional arrangements, which sometimes include or are led by natural science, engineering, and design disciplines that may not share a concern for social perspectives, much less equity and justice?
Citations


Key Words: interdisciplinary collaboration, capacity building, climate change, community engagement, institutional design

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**Track 10 Individual Paper Submissions**

**TAUGHT IN AMERICA II: CROSS-BORDER AND MULTICULTURAL LEARNING THROUGH A COSMOPOLITAN EDUCATION IN PLANNING**

Abstract ID: 17

Individual Paper

CHIU-SHEE, Colleen [UIUC] colleenxqiu@gmail.com, presenting author

SHI, Linda [Cornell University] lindashi@cornell.edu, co-author

In today’s hyper-connected world, urban issues—especially environmental risks and socioeconomic injustice—span political and ideological chasms, necessitating urban professionals to work across cultures and borders. Yet natural and anthropogenic hazards—including COVID-19, climate change, and wars—have heightened political and cultural polarization. As global divides deepen, planning education must prepare aspiring urban professionals to navigate conflict and become effective boundary spanners. Since the 1980s, international students and faculty have cautioned against a U.S.-centric bias in USPE for its failure to enable more just and humane urbanisms on international levels. Scholars have problematized unidirectional knowledge export, highlighted epistemologies and practices beyond America’s core culture, endorsed perspectives and cultures historically considered inferior, and called for global learning that transcends “Western” monoculturalism (Carolini 2020). Sanyal and contributors (1990) advocated a “one world” approach, while others proposed “global approaches” to USPE to better attract and support international students and help domestic students understand global-local dynamisms (ACSP 1994). Recently, educators are bidding to incorporate planning perspectives from broader geographic origins and cultural traditions to increase USPE’s intellectual diversity and make international students feel included. In 2013, the Planning Accreditation Board mandated teaching global planning. American planning schools’ Global Education Task Force has recommended the institutionalization of a “relational,” “scale-bridging,” and “context-sensitive” approach, which renews core curricula with up-to-date global comparative perspectives, incorporates faculty’s and students’ international knowledge, and utilizes program-specific local-global interconnections (ACSP 2019). Yet, students remain unsatisfied with persistent U.S.-centric universalist perspectives and call for global approaches to planning education. In particular, Sino-American tensions epitomize widening global divides, and the struggles of Chinese returnees who receive U.S. planning education are emblematic of urban professionals’ cross-border, intercultural challenges. Since the 1970s, America’s rising power and China’s economic liberalization have turned international education into a crucial area of Sino-American interdependency. However, as Sino-American tensions boil up, Chinese graduates fear xenophobia, racism, and
gun violence in the U.S. and choose to return home. Returnees with USPE (hereafter, haigui) confront conspicuous cultural and ideological conflicts. Many feel like cultural misfits both abroad and in China and second-guess their U.S. education. Haigui’s struggles and doubts suggest the need to renew global thinking in planning schools in America and elsewhere. In response, this paper—a second of two (Shi and Chiu-Shee, 2022)—investigates USPE’s transnational impact and asks: how has studying planning in the U.S. influenced haigui’s worldviews and ethical perspectives on planning? In 2021, we conducted semi-structured, in-depth interviews with 34 haigui who shared their difficult searches for career fulfillment, deepening understandings of American and Chinese planning cultures, identity struggles between cultures, and dissonant nationalist and globalist sentiments. Confronting intercultural discomfort, haigui pursued transformative agency both locally and transnationally and developed a spectrum of attitudes ranging from nationalist defensiveness to plural worldviews. Amid rising global divides, Chinese returnees’ struggles and growing cosmopolitan orientations illuminate suggest how the ethos of “cosmopolitanism”—a key notion reconciling nationalist and globalist rationales (Hansen 2017)—could help both individuals and planning educators better adapt to changing orders in a diverse and conflict-riven world. A cosmopolitan education would adapt to global changes, build creativity on diversity, and foster shared purposes, intercultural harmony, and a sense of unity amid difference. This is in the nature of democratic education and fosters students’ moral and intellectual courage to learn from other cultures while being reflective to the known.

Citations


Key Words: U.S. planning education, international education, Chinese students, cosmopolitanism, U.S.-China educational exchange

THE EVOLUTION OF THE FOUR ERAS OF URBAN PLANNING EDUCATION IN THE UNITED STATES

Abstract ID: 21
Individual Paper

ANACKER, Katrin [George Mason University] kanacker@gmu.edu, presenting author

Urban planning education in the United States has undergone many changes throughout the 20th century. My goal in this article is to provide a historical perspective and classify the evolution of urban planning education into four eras:

First, from the early to mid-20th century, professionals from select disciplines and fields collaborated and institutionalized planning education. These experts, who worked in architecture, landscape architecture, engineering, surveying, public health, law, public administration, political science, and geography, among others, gradually started collaborating to solve issues of health and sanitation, urban sprawl, blight, affordable housing, mass transit, and other challenges in rapidly growing cities and regions in the U.S. by composing enabling legislation and zoning rules and applying lessons learned abroad, primarily in Europe. These professionals also defined and institutionalized urban planning education by hosting and attending professional conferences, establishing professional associations, teaching independent planning courses, creating urban planning education programs and degrees, and establishing urban planning curricula, along with writing and publishing books,
periodicals, and reports. In the early 20th century, professionals institutionalized urban planning education, with practitioners teaching independent planning courses in architecture, landscape architecture, engineering, surveying, commerce, political science, sociology, and education, even in art departments at some universities.

Second, during the mid-20th century, there were tensions between design/physical planning and policy/social sciences, as well as generalist and specialist education. The former tension was triggered by the evolving specialization and influenced by specialists affiliated with the Chicago School and John Merriman Gaus, which resulted in field boundaries differentiating between planners and non-planners. The latter tension culminated in Harvey Perloff suggesting training “Generalist[s]-with-a-Speciality.”

Third, from the mid- to the late-20th century, there was institutionalization through recognition and accreditation, for example through the efforts of AIP’s Committee on Education and Personnel Standards, AIP’s Committee on Planning Education, AIP’s Board of Governors, AIP’s National Education Development Committee, ACSP’s Advisory Committee on Accreditation and its Task Force on Accreditation, and finally, the PAB.

Fourth, since the late-20th century, planning education has transitioned to studio instruction and internationalization. Although these components also occurred in previous eras, they have become quite prominent over the past two decades. The fourth era of urban planning education has been facilitated by conferences hosted by the GPEAN members, international student and professional exchanges and studios, and the Dialogues in Urban and Regional Planning book series.

In an evolving fifth era, triggered by the complex, compound, wicked, and interconnected meta challenges of sustainability, planning education is transitioning from interdisciplinarity to transdisciplinarity. Transdisciplinary includes professionals from different disciplines and fields, sharing not only goals but skills. Specifically, transdisciplinary requires not only role release but also role expansion. Taking off one’s long-held disciplinary lens will be uncomfortable for most academics but may allow for synergies necessary for transdisciplinarity. Transdisciplinary education utilizes multiple languages (or jargons), values, and methods from several disciplines. While combining these aspects creates synergies, achieving them will not be easy. Thus, transdisciplinary studios may benefit from consultants who facilitate conversations among instructors, students, and other stakeholders, similar to facilitators who work in conflict resolution or management.

Citations

- Gaus, J. M. (1943). The Graduate School of Design and the education of planners. The Graduate School of Design.

Key Words: planning education, history

THE COMPREHENSIVE PLANNING PROCESS AND POST DISASTER PLANNING
Abstract ID: 62
Individual Paper

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Planning after a natural disaster requires adaptation of the planning objectives and processes to the contextual conditions that become uncertain till the environmental, demographic and physical contexts stabilize. Planning as an evidence-based discipline does not go well with disaster-stricken contexts because of data fluidity and timing of its availability that require periodical adjustments of the planning objectives and their necessary planning steps. The comprehensive planning model is not always possible after a natural disaster because of the incrementality of data availability.

A normal process of post-disaster recovery usually starts by providing sketchy data on the magnitude of the problem and the damage caused, in post Ian Hurricane Florida, first data out were about the strength of the Hurricane, direction, path and similar data that scientists can find in the maps and weather stations which are scientifically verified and measurable. These data are only good in determining the geographic locations for possible flooding, number of the displaced population and their basic recovery needs. More data about the infrastructure damage follows within a week when ground communication is established, and the real needs are assessed. Planners need to take appropriate actions based on the available data, till full data is made available about the different aspects of the community and its built environment.

Availability of data is currently enhanced by the many technologies for automated and remote sensing that are available before data can be received on the ground as was the case decades ago.

Types of data in post Ian hurricane (2022) in Florida started by data about the hurricane itself, followed by remote sensing maps showing data about the affected geographic areas before any data became available about the damaged buildings or infrastructure or the displaced population. Data about the natural environments were evidence based, while demographic data were only simulated and projected, and data about the infrastructure and service building collapses were only sketchy as work on the ground was not possible yet in all geographic areas. However, recovery and mitigation efforts in post-disaster situations cannot wait for true data to become available before work starts on securing the grounds against pollution, electrocution, or high nuclear radiation releases. Hurricane Ian made touch down in Southern Florida on September 28, 2022, the newspapers started on the next day to mention the risks of more than a dozen sewage treatment plants releasing raw sewage, because of flooding, into the surrounding urban and farm areas. September 29 newspapers also started to warn against possible industrial waste pollution in Charleston, South Carolina, because of the expected flooding. Consequently, preparation for possible water and soil pollution was based on speculative and projected data because of the associated dangers before any real data was available.

This paper will explore post disaster planning processes and data needs as was in earthquake and hurricane stricken areas in different contextual conditions. Purpose of the research is to define the proper planning approach, process flexibility measures, and the incremental planning product expected in each context.

Citations

- Florida Department of Environmental Protection Office of Resilience and Coastal Protection, Hurricanes Ian and Nicole Recovery Plan for Florida’s Beach and Dune System, December 9, 2022
- Stephen R. Barnes, PhD David Neef, MPA Anna Osland, PhD Jackson Voss, MPP, Regional Flood Protection Governance in Louisiana, University of Luisiana at Lafayette, May 2021

Key Words: post-disaster planning, Planning process, Planning theory, hurricane, earthquake
EFFECT OF EDUCATIONAL INEQUALITY BY THE DIFFERENCES IN THE SPATIAL DISTRIBUTION OF CHILDCARE METHODS: FOCUSING ON THE EXTENDED CHILDCARE RATE IN SEOUL

Abstract ID: 94
Individual Paper

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In this study, we would like to examine the spatial distribution differences in childcare methods by limiting the scope to infant care among the socialization policies of care, and to clarify the factors and implications that make this difference. Through two hypotheses, we examine households’ differential responses to the collective supply of extended childcare at daycare centers, and check whether this difference produces unexpected inequality in childcare. First, it identifies the spatial pattern of the utilization rate of the extended class of daycare centers in Seoul and the socioeconomic indicators of the region that affect it. Second, we examine the possibility that this spatial differentiation will lead to differentiation of the social capital of childcare, that is, the local infrastructure of childcare culture and childcare, resulting in regional inequality in childcare.

As the first step of the study, data visualization and statistical analysis confirm regional differences in the utilization rate of extended classes and verify whether this difference is related to local socioeconomic indicators. In childcare, dependence on daycare centers varies depending on household income. However, if the impact of socialization policies of care, such as the utilization rate of extended childcare, is analyzed only at the individual household level, the neighborhood effect, which is a key mechanism of the educational gap, is overlooked. Individuals are influenced by the social support service conditions of their residence and neighbors, and this neighborhood effect again affects individuals’ housing, school selection, and educational support, thereby strengthening the educational gap by class. Since migration also occurs to enjoy the social capital and educational infrastructure formed in the region, it is clear that the patterns of childcare and education are similar by region, not by income quintile. Therefore, identifying the spatial pattern of the utilization rate of extended childcare is the first step of this study to identify the spatial inequality of childcare.

In the second stage, we will find out the specific status of the suppliers (daycare centers) and beneficiaries (home) of extended childcare through surveys and interviews. Understand in detail what qualifications are required and treatment of extended childcare teachers, how they operate extended childcare hours, and what activities children who respond positively to extended childcare and do not use extended childcare after the House of Representatives. Through this, we would like to explore the possibility that the use of extended childcare does not just show the presence or absence of care providers at home, but also the possibility of an indicator of the neighborhood effect in which different educational infrastructures are provided to children by region. This other education will be consistent with the distinction between education that meets the values required by society and education that does not, mentioned by Anturaru (2003). Therefore, this study will be a spatial empirical analysis to confirm how much extended childcare is contributing to the reduction of the gap in the quality of care aimed at socializing care.

Citations


Key Words: socialization of caring, childcare policy, space distribution, regional inequality, opportunity inequity
Coined by IBM in 2009, the concept of smart city has emerged as a planning discourse informing city design, but the attempts to applying this idea in city building has often become controversial. In 2015, Google (now Alphabet) established Sidewalk Labs as its urban innovation arm to explore sustainable infrastructure and urbanism. Two years later, it won the commission to develop a 12-acre waterfront site in center city Toronto and aspired to build a model smart city supported by cut-edge technologies and design. Sidewalk Labs worked with Waterfront Toronto to prepare a comprehensive master plan by incorporating sophisticated technological solutions in many aspects, but eventually gave up this project in 2020 in the face of rising community resistances.

Many issues derived from this failed urban experiment remain unresolved. What aspects of the smart city concept did residents in Toronto oppose? Could Sidewalk Labs’ digital innovations achieve environmental and social sustainability that the planners had claimed? How can the universal smart city concept adapt to distinct social conditions in different societies? As the most elaborate smart city design thus far, Quayside deserves in-depth investigation to gain more insights into this emerging practice of urbanism.

Instead of resorting to a conventional case study method, I incorporated this research into a graduate urban design studio. Grays Ferry in Philadelphia was chosen as study area, which resembles Quayside in basic geographic and demographic conditions but differs in its social challenges facing a low-income and gentrifying neighborhood. The design problem prompted students to not only analyze Quayside as an exemplary smart city precedent, but also delve into the causes of its failure to draw crucial lessons in community planning. We reached out to residents living around the site and engaged them in multiple phases of urban design. These efforts gradually shifted students’ focus of investigation from the issues of data and privacy, which other researchers focused on, toward the mismatch between the technological visions and the social constructs of local community. Findings generated by the research enabled the faculty and students to frame an urban design that engaged a more inclusive idea of social and environmental sustainability. In addition to an incremental approach to urban redevelopment, the plan laid out a new strategy of digital innovation centered at a bottom-up process to shape a resilient neighborhood.

Through analyses of the curricular design, teaching process, and learning outcomes, this paper examines current challenges and opportunities for designing smart cities. The study exposes the lack of community participation, the misunderstanding of mass market, and a rigid concept of sustainability that tends to overlook important aspects of social infrastructure in the design and implementation of smart city. While the proposed method must be tested in real developments, the curricular experiment increases students’ awareness of the close relationship between smart city design and bottom-up community building and sheds a new light on shaping a new discourse of sustainable urbanism.

Citations

WHAT DO STUDENTS GAIN FROM COLLABORATIVE, IN-PERSON, INTERNATIONAL EDUCATION EXPERIENCES?
TEN YEARS OF THE TRAN-ATLANTIC SEMINAR IN URBAN & REGIONAL PLANNING
Abstract ID: 239
Individual Paper

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ACSP-AESOP Transatlantic Perspective

Many professions, including Urban & Regional Planning, strive to build international networks to facilitate comparative learning and to address issues of cross-national scope. APA's International Division is one example of this and APA's annual conference draws attendees from around the world. Academic planning also devotes attention to international scholarship and networks, for example through collaboration between the ACSP and AESOP, through the World Planning Schools Congresses, and through informal arrangements.

In recent decades, the field of higher education has studied and identified the benefits of providing students with cross-cultural learning experiences, including student-centered collaborative learning (Forum on Education Abroad, The, 2020). Yet, the planning education literature is silent about the approaches, methods and results of collaborative, international planning education efforts, as our reviews of the Journal of Planning Education and Research (JPER) and education journals revealed. To be sure, JPER frequently publishes scholarship on collaborative student learning in domestic environments, including fieldwork in American communities. But international planning education methods and results have not appeared in the planning education literature.

Our paper seeks to begin to fill that gap. We describe the operation and student learning outcomes of a Trans-Atlantic Seminar, which an American and a German university have jointly offered on numerous occasions during the past ten years. Unlike an increasing number of international learning experiences (such as COIL, Collaborative Online International Learning; see Katre, 2020) that operate in a virtual environment, our seminar has operated mostly as an in-person experience with travel to both countries in the course of a single semester.

We describe the logistics of organizing the seminar, as well as the themes on which each year has focused, but we devote the bulk of the paper to answering the question of what students gain from the seminar experience. Our account is based upon the results of in-depth interviews conducted with 60 German and American students who have either taken, or who are now taking, the seminar. Our interview protocols are informed by the non-planning literature on collaborative student-centered learning (Barkley et al., 2005). We ask each current and former student questions designed to elicit reflection upon both formal learning, as well as inter-cultural understanding, and life lessons and professional choices that may have been influenced by the seminar.

We focus some attention on the informal interactions that occur outside of formal work times, such as over meals, during nighttime casual activities, or on route to meetings with practitioners. We seek to understand whether this informal “downtime” learning has identifiable benefits, as this is a distinctive characteristic of in-person, international seminars, as opposed to online collaboration. Our intent is not to criticize online collaboration (we used this method during the first year of COVID), but to distinguish perceived benefits of the in-person approach (Hautala and Schmidt, 2019). Preliminary results show that collaborative international seminars bring both short-term and long-term benefits to students.

Citations
EDUCATING STUDENTS TO WORK IN SMART CITIES: ARE PLANNING PROGRAMS TEACHING THE TOPICS, SKILLS, AND TOOLS PRACTITIONERS SEEK?
Abstract ID: 398
Individual Paper

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Small and large cities are building communication infrastructure and implementing novel data architectures and algorithms. Some are also creating plans for this new technology. There are broadband master plans, plans for electric vehicles, plans to address digital equity and inclusion, responsible artificial intelligence strategies, draft policies and plans to protect digital privacy in the public realm, and smart city roadmaps. Shifting technology is introducing subjects to planning that the discipline has not focused on in the past, from data science to technology policy. Planning for and coordinating new technology adoption is leading to new city jobs, like smart city planner. Are planning curricula preparing students to work in today’s decentralized computing environments, with its data and algorithms, related plans, and jobs?

The subjects of technology and quantitative research methods have been debated in planning pedagogy literature for over fifty years alongside past waves of technology. The 1960s marked the rise of the mainframe computer and optimism about applying systems analysis concepts to planning, famously followed by strong critiques of the rational model. In the 1990s, microcomputers became more pervasive, there was growing availability of Geographic Information Systems (GIS), and planning programs included GIS specializations. Today, the smart city and its decentralized computing technology, data, and algorithms present a new shift in planning technology and relevant methods.

Beyond quantitative methods, however, there are two essential consequences of the shift from the mainframe, to the microcomputer, to decentralized computing, that may have implications on how or what planning programs teach. The first is that decentralized computing introduces new dimensions to participation and representation, core concepts in planning education. Another second is that the infrastructure of computing is steadily shifting from the private to the public realm.

Through two surveys, this study compares the topics, skills, and tools taught in planning programs with those sought by smart city practitioners. With responses from 37 unique accredited planning masters programs and 69 smart city practitioners, we compare the results of the surveys, evaluate where teaching and practice are aligned and where there are gaps.

Results from the survey show that the skills and tools practitioners seek when hiring planning students are predominantly aligned with what educators teach. Yet, there are some mismatches between practitioner demand and educator supply that may indicate new directions for planning education. In particular, none of the top three
qualitative topics taught by educators are the same as those sought by practitioners. Evaluating the under-supplied topics, skills, and tools may be especially helpful in indicating opportunities for new approaches to delivering quantitative education and new visions of the role of the planner in the era of decentralized computing.

Citations


Key Words: smart cities, pedagogy, decentralized computing, quantitative research methods, technology planning

NOTES FROM THE ANTI-DISPLACEMENT STUDIO

Abstract ID: 759
Individual Paper

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This paper considers practical openings, challenges, and strategies for aligning urban planning and design studios with community-led decolonizing agendas. It focuses on the case of the anti-displacement studio, a Boston-based community-engaged research and design studio offered at Northeastern University that seeks to unravel the contemporary conundrum of displacement urbanism while activating the role and responsibility of the designer as creative accomplice to place-based activists and frontline communities. At the invitation of community leaders and activists in Boston’s Roxbury neighborhood, the studio has enrolled students of urban planning, architecture, and design studies over two academic years (three semesters—Fall 2021, Fall 2022, Spring 2023) to support existing community-driven place-making and place-keeping efforts—with a focus on politics of land. Led by the author, the studio is motivated by key questions of (1) how to retool and reformulate planning and design methods to serve anti-displacement activism and movements at the local level, and (2) how to problematize, reflect on, and inform related planning and design pedagogy.

This paper critically examines and reflects on the studio pedagogy and methods, in part to continuously reiterate reparative planning education and training practices of collectively reimagining and rebuilding from harm. It approaches decolonization in the Roxbury neighborhood context as ongoing struggles by mostly Black and Brown communities to build relations of collective power with respect to the land for the purpose of reclaiming spatial planning and development from occupying authorities and extractive forces. The analysis applies the decolonial educator la paperson’s concept of third worlding universities and technologies framework (la paperson 2017). As “an amalgamation of first, second, and third worlding formations” (xiv), universities are not only “land-grabbing, land-transmogrifying, land-capitalizing machines” (p. 32) but also include machined people—such as students, staff, faculty, and alumni—who are “technologically enhanced by legitimated knowledge and stamped with the university’s brand” (p. 56). La paperson’s technologies framework redefines settler colonialism—beyond particular racial identities of the settler-native-slave triad—as technologies of settler supremacy, indigenous erasure, and anti-Blackness. These generate patterns of social relations to land, show up and operate within the university itself, and can be further reappropriated for decolonizing purposes.

The paper begins with the context of Northeastern University as an amalgamated first, second, and third worlding university, situates it in Boston’s City Council District 7 (D7), and describes enabling conditions and social
infrastructures for the anti-displacement studio. Next, it recounts the beginnings of the action research to support creative placemaking and placekeeping initiatives in D7 and emerging understandings of decolonization in the neighborhood context. In discussing the set up and work of the anti-displacement studio, we touch on the three-module structure of unraveling the complexities and nuances of urban displacement as it plays out in Roxbury, revisiting cultural memories and lessons from the past, and praxis, or codesigning anti-displacement strategies with community activists and leaders. The praxis component included planning support for the ARTery, a community arts corridor (that would reface corner stores and other local businesses, reinforce cultural identity through murals and public art, and improve neighborhood streets around the needs of existing businesses/residents), and community-based activation and redevelopment strategies for publicly-owned parcels in D7. The concluding discussion returns to Yang’s question, “how might we operate on ourselves and other technologies and turn these gears into decolonizing operations?” (p. 24). We reflect on the studio’s repurposing of common planning methods, tools, and technologies and the importance of centering the perspectives and agential capacity of D7 leaders and Roxbury-based partners to counter our own biases and blind spots as university-based planners and designers.

Citations


Key Words: Planning pedagogy, Decolonizing universities, politics of land, community planning, place-making and keeping

ADVANCING DIVERSITY IN THE PLANNING ACADEMY AND PROFESSION: UMASS BOSTON'S SUMMER PROGRAM IN URBAN PLANNING FOR YOUTH OF COLOR

Abstract ID: 859
Individual Paper

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One of the key challenges facing the urban planning profession is the glaring and persistent underrepresentation of people of color in our field. This lack of representation has denied our profession access to the impressive body of community-building, problem-solving, and place-making knowledge and skills existing in African American, Latino, Native American, and new immigrant communities within our cities. Our failure to tap what Geertz described as the “local knowledge” present within these and other marginalized communities has seriously undermined our ability to craft innovative planning and design solutions that effectively address the serious environmental, economic, and social problems confronting our central cities. Our limited success in addressing such issues as public safety, workforce development, affordable housing, health equity, food security, and transportation justice has eroded the confidence many citizens, especially residents of low-income communities of color, have in the efficacy and legitimacy of our profession.

In 2021, former City Council Member, Michelle Wu launched here successful campaign to succeed Marty Walsh as Mayor of Boston. One of the key elements of her campaign was the reform of the Boston Planning and
Development Agency beginning with the diversification of its professional staff. This pressure prompted BPDA’s Director of Diversity, Equity, and Inclusion to invite the region’s major urban planning and design programs to devise and implement, with city funding, initiatives aimed at introducing youth of color to the many exciting public service career opportunities available within the fields of urban planning, design, and development. In 2022, the University of Massachusetts Boston’s Department of Urban Planning and Community Development launched, with BPDA funding, its 2022 Summer Program in Urban Planning as a first step towards establishing a “pipeline for youth of color in planning” to increase the percentage of minority planners in Boston from 5% to 28% during the next twenty years.

This paper describes the origins, evolution, and implementation of the first phase of this ambitious experiential education project which introduced sixteen freshmen and sophomores from four Roxbury high schools to the field of urban planning by engaging them in a month-long, field-based research project examining the “extreme heat” challenge facing the city’s second largest minority community. The paper will present the “extreme heat” research data generated by this high school team, supported by UMass Boston graduate planning students, which has been presented to leaders of the Roxbury community, members of the Boston City Council, staff and board members of the Boston Planning and Development Agency as well as seventy-five planning directors who participated in a National Affordable Housing and Community Development Webinar hosted by the American Planning Association. The paper will also describe how the extreme heat mitigation proposals developed by these students are being implemented by the Boston Planning and Development Agency, Department of Parks and Recreation, and Office of Climate Resiliency. The paper will conclude with a description of the impact which this program has had on the educational and career plans of its participating high school students.

Citations


Key Words: Youth participation in planning, Workforce development in planning, Diversity, equity, and inclusion, Climate change and extreme heat, Youth of color pipeline

PERFORMING PUBLIC PARTICIPATION: EMERGING CHALLENGES AND OPPORTUNITIES FOR PLANNING PEDAGOGY

Abstract ID: 888
Individual Paper

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At last year’s ACSP Conference in Toronto, a group of 24 scholars came together through four pre-organized sessions and a post-conference workshop that sought to reinvigorate a critical research agenda for participatory planning. The sessions, organized under the banner of “Performing Public Participation”, engaged with the ways participatory planning is changing and raised concerns about bureaucratization and institutionalization (Legacy 2017); the increased role of new technologies and online participation (Milz & Gervich, 2021); and the need for a more pluriversal methods (Vasudevan & Novoa, 2022), particularly within the context of ongoing struggles for
racial and Indigenous justice. In different ways and from different perspectives, all of us were pulling at the question of whether participatory planning was performing the way it was intended or had become performative. Inspired by Boyer’s (1990) four dimensions of scholarship – discovery, integration, application, and teaching – we were particularly interested in how our collective efforts to explore new directions in participatory planning research would inform our teaching practice. This paper presents the results from a session at the post-conference workshop that considered the implications for pedagogical innovation.

The workshop began with a short presentation to highlight emerging questions, issues and tensions that arise when teaching public participation before moving into a world-café-style discussion. Participants were invited to move between tables that were dedicated to collecting ideas related to the following topics: 1) inspiration and themes for a course on public participation; 2) classroom techniques and learning approaches; and 3) assignments and other modes of assessment. Participant responses were captured on large pieces of butcher paper and then collated and thematically coded after the workshop. Thematically, participatory planning courses would need to grapple with what Miraftab (2009) has termed the “invited” and “invented” spaces of participation by considering the more ‘toolbox’ approach to designing public participation found in many state-led processes while also exposing students to more grassroots initiatives. Our discussion of classroom tools and techniques highlighted numerous experimental learning options, while also stressing the importance of not attempting to do too much, an idea that was framed as ‘going slow to move fast’. The preferred modes of assessment blended direct observation of participatory processes with more applied assignments that asked students to practice their skills in designing and facilitating participatory processes. There was also considerable interest in less instructor-centred approaches such as peer assessment and ‘ungrading’. Our paper presents these insights as a draft syllabus annotated with rationales, debates, and other contexts from our workshop and the authors’ subsequent discussions.

Citations


Key Words: public participation, pedagogy, syllabi, experiential learning, assessment

NAVIGATING RELIGION AND URBAN SPACE IN DIVERSE CLASSROOMS

Abstract ID: 976

Individual Paper

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This paper outlines the content and the lessons learned from teaching a new course titled “Religion and the City” cross-registered in three departments of Urban Studies, Religious Studies, and Humanistic Studies at Princeton University. The course introduces students to the ways in which religious beliefs and spiritual practices of urban communities manifest themselves in the built environment and how these manifestations are being contested or managed by secular principles of urban governance and spatial planning. Students study the conceptual and historical debates on the role and place of religion in the public sphere and analyze empirical cases of how spatial decisions regulate or enable expressions of religious difference in urban settings. Students, who
come from different academic and religious backgrounds, engage in difficult conversations about the way that claims of religion implicate questions of diversity, difference, and justice in contemporary cities.

In this paper, I will reflect on the pedagogical approach I used in teaching this course and discuss students’ reactions and experiences throughout the semester. My presentation will be organized in three sections. I will first provide an overview of the course and its three-part structure: Religion Defined, Religion, Urbanized, and Religion Managed. I will then summarize students’ reactions and course evaluations, including their experience in writing about religion and urban space, engaging in role playing exercises of the class, and producing a short documentary about the topic. I will conclude by outlining the lessons I have learned from teaching this course in a diverse classroom and explore ways to build on this experience for a more active discussions about religion and secularity in planning academia.

Citations


Key Words: Planning education, Religion, Diversity, Urban Space, Secularism

THIRD SPACE PEDAGOGY, LEARNING LANDSCAPES AND COMMUNITY-BASED PARK DESIGN IN DOVE SPRINGS, AUSTIN, TEXAS

Abstract ID: 982
Individual Paper

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We assess the learning outcomes from a one-year, two-semester studio sequence that produced a community-based design proposal for a neglected city park in a primarily Spanish-language neighborhood in Austin, Texas, which has long faced high risks of flooding. Place-based pedagogy in such environmental justice communities must be finely attuned to the needs of partner organizations and carefully co-design project goals and expectations (Botchwey and Umemoto, 2018) in order to foster open and productive dialogue, honest goal-setting, and deliberate co-productions while avoiding clientelist relationships. In the specific context of Latin(o/a/x) urbanism, such a critical, situated, and place-based pedagogy must derive from the multiple ways in which residents are already “participating in their communities in everyday places” (Lung-Amam et al., 2015: 340) and attend to the complex relations of actors, stories, and materials that constitute Latin(o/a/x) placemaking (Irazabal et al., 2015). By facilitating encounters and coproduction with residents in a variety of third spaces, we aimed to foster students’ and residents’ understanding of the depth and potentiality of the site and co-produce a model for place-based design and planning practice in Latin(o/a/x) landscapes. We propose a ‘third space’ (Bhabha, 1994) approach to place-based service-learning pedagogy in order to conceptualize opportunities for creative and “collaborative human action” (Rios et al., 2012: 3) in impromptu and informal spaces outside the regular classroom. By drawing on insights from assemblage theory, we thus seek to illustrate a relational approach to field-based learning in vulnerable communities that accounts for situated memories, materials, actions, and imaginaries.
Citations


Key Words: Critical pedagogy, Place-based pedagogy, Learning landscapes, Placemaking, Austin

BENEFITS OF EMBEDDING URBAN INFORMALITY IN PEDAGOGY FOR PLANNING AND DESIGN STUDIOS

Abstract ID: 1121

Individual Paper

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Academic curriculums in the built environment have traditionally excluded the study of informal urban practices and their intertwined character with the formal city (Jones, 2019). Recent studies about pedagogy in urban planning contend the need to introduce courses that explore the nature and global significance of urban informality in cities’ socio, economic and urban development (Kamalipour and Peimani, 2019). Mukhija and Loukaitou-Sideris (2015), for instance, argue that incorporating urban informality content into urban planning curriculums, could help students 1) Make the wide variety of informal urban practices and their global significance visible, 2) Unpack the scale and complex nature of informality, 3) Identify unconventional stakeholders, and 4) Develop policy sophistication. These scholarly, however, has not yet evaluated the impact urban informality courses have on students’ professional development, from students’ perspectives. Focusing on students’ perceptions, this research explores the contribution of an urban informality planning design studio to students’ professional development. We ran a studio focusing on Rio de Janeiro’s Maré Favelas with University of Virginia’s second year undergraduate urban and environmental planning students. Studio activities and assessments were design based on experiential learning principles. Students’ perceptions on their learning experiences were evaluated through surveys and focus groups interviews. Preliminary findings suggest students significantly gained interest and understanding in the four areas suggested by Mukhija and Loukaitou-Sideris (2015). Findings also indicate that stimulating real-world situations and engaging with community members helped students gain a deeper understanding of poverty and inequality, co-production, and its value to address local issues in global contexts. This research advances urban planning pedagogy continuous efforts to make planners better informed and globally minded practitioners.

Citations

- Jones, P. (2019). The case for inclusion of international planning studios in contemporary urban planning pedagogy. Sustainability, 11(15), 4174
TWO PERSPECTIVES: INTERDISCIPLINARY URBAN DESIGN STUDIOS
Abstract ID: 1196
Individual Paper

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This paper is a critical reflection, from two disciplinary points of view, on an urban design studio involving architecture and city planning students and faculty. The studio has evolved over five iterations in the at the University of Manitoba in Winnipeg. Our reflections on this are fuelled by the special edition of the Journal of Urban Design (2016, 21:5) about urban design pedagogy.

Before its current configuration, the studio was offered as an undergraduate design studio. Studio groups employed an array of graphic tools to illustrate their proposals, but attention most often focused on a 1:500 model of the city centre. This model caught the attention of design professionals, business associations, and politicians, and generated media attention.

Over the first few years, students imagined public realms with little programmatic limitation. Many of the proposals appeared more appropriate to larger rapid growth cities, unrealistic for mid-sized, slow-growth Winnipeg. We developed a density-visioning exercise that illustrated how the population required for a more vibrant downtown could be accommodated in more modest building heights spread across the whole of downtown, in buildings that could encourage life on all streets.

The most recent iterations have included architecture and planning students sharing a space, but enrolled in distinct but overlapping studios. Each disciplinary group has its own responsibilities and operates within different pedagogical cultures of its home department. The architecture students take responsibly for the design of individual infill buildings while planning students provide data that determined programmatic elements, propose urban design guidelines, and examine the regulatory challenges that this lower-scale vision of built form might present.

The students work in interdisciplinary groups to determine the overall design approach for specific street-facing blocks and the public realm that they produce. The architectural propositions have tested the limits of the urban design guidelines, but city planning students have challenged the architecture students to think about how they contribute to the production of a shared public realm, and to a vision for Downtown Winnipeg. The most recent iterations of the studio have also introduced all students to the economic considerations that are faced by developers.

Over the last two years, the students have engaged with the City of Winnipeg planning team that is responsible for shaping a new CentrePlan for downtown. Ideas that had their origins in the studio have inspired discussions at design charrettes sponsored by the professions and the City in attempts to spark creative thinking about how downtown might be reconsidered.

This approach to interdisciplinarity has been beneficial to both cohorts. They get a better understanding of how the other thinks, and the considerations that they have learned to address. The architecture students broaden their vision of design beyond the building site they are assigned, and planning students come to better appreciate the impacts that regulations have on shaping the public realm. Both groups are asked to consider what factors, beyond design, lead to a more just city. In general, it situates individual architecture projects in urban social contexts, and starts to address the challenges of teaching planning students about design.

Our approach to the studio remains iterative – we learn from each year. This paper draws on interviews with past
students from each discipline, to better understand how their thinking changed over the course of their studio experiences. The interviews also help us better understand how we have changed to studio from year to year to better integrate the learning experiences—introducing a shared seminar to discuss issues we are encountering, finding better ways to present the outcomes of the studio to reflect the collaborative nature of the work process.

Citations


Key Words: urban design, interdisciplinary pedagogy, planning pedagogy

TO BE, OR NOT TO BE? PLANNING EDUCATION BETWEEN NEO-LIBERAL URBAN DEVELOPMENT AND A CONSULTOCRATIC STATE

Abstract ID: 1236

Individual Paper

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The neoliberal turn in urban development has posed questions of planning practice and education, and India is no exception. The footprint of planning practice and education in India has been light in relation to the extent of need, but recent initiatives by the national government to create more institutions and planning programs in the country make the same questions pertinent. Urban planning education in India is challenged from other directions as well—relevance to context in terms of social inclusion and increasingly, resilience and sustainability concerns, location and nature of work of planners, and the institutional structures for planning practice, among others. (Kamath 2014, Aranya and Vaidya 2016).

Scholarship on planning education in India has traced its history and trajectory, and examined the relevance of typical curricula, centered on rational-comprehensive physical planning to formulate long-term Development / Master Plans, to contemporary practice (eg., Kumar et al,2016). Others have proposed new paradigms and alternative models, and suggested curricular changes from global and Indian perspectives (eg., Kamath 2014, Mahadevia and Bhatia 2019, 2021). Authors have also identified the policy and institutional changes necessary, especially to make planning more inclusive, equitable, sustainable and "smart" (eg., Aranya and Vaidya 2016). There is, however, little explication of the structural and practical issues in adopting such recommendations, and which militate against substantive change; new Programs thus are constrained to mirror prevalent patterns. This paper uses the author’s seven years of experience of setting up a new Masters in Urban and Regional Planning Program in Odisha, India, focused expert-group discussions, document analysis, and analysis of the institutional structures and current planning job typologies in the country to systematically examine the issues in developing contextually relevant planning education in India, while staying true to the field’s core values of equity, inclusion and common good, understanding of urbanization processes and spatiality, and technical skills.

Innovations in curriculum design are precluded by the prescription of a standard curriculum centered on physical planning and preparation of landuse master plans, by the accrediting bodies - the All India Institute for Technical Education (AICTE) and the Institute of Town Planners of India (ITPI) (NIUA 2017). While irrelevant to contemporary
In either case, lack of planners in the state machinery, weak local governments and extensive engagement of consulting firms to discharge planning responsibilities means most planners now work in a private sector context. Analyses of job roles reveal that they require different orientations, knowledge and skills. First, the orientation and ethical bases shift from “public service” and the “common good”, and equity and sustainability concerns, to focus on “private interests”, bottom lines and return on investment. Understanding of finance, PPP arrangements, project management, business development, and other subjects related to functioning of the firms becomes necessary – subjects typical of Business Management education, not Planning. Keeping Planning education relevant to practice thus posits fundamental questions of its core orientation, knowledges and skills.

Citations

- Aranya, Rolee and Chetan Vaidya. 2016. Planning Education for a Smart Urban India, in Kumar et al (eds), Urban and Regional Planning Education (pp.33-45)
- Aranya, Rolee and Chetan Vaidya. 2016. Planning Education for a Smart Urban India, in Kumar et al (eds), Urban and Regional Planning Education (pp.33-45)

Key Words: Planning, Education, India, Urban

Track 10 Research in Motion (RiM)

WHERE DO I GO FROM HERE? EXPLORING BARRIERS IN TRANSITIONING UNDERGRADUATES FROM PLANNING STUDENT TO PROFESSIONAL PLANNERS
Abstract ID: 887
Research in Motion (RiM)

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In the last 20 years, there has been an increase in the number of undergraduate urban planning programs in the United States, both independent and affiliated with graduate planning programs (Miller 2019). The expansion of undergraduate planning degree programs creates new opportunities to raise awareness about planning and recruit a broader diversity of students to the profession and the planning workforce (Diko et al. 2023). Beyond career preparedness, undergraduate planning programs can provide exposure to how local governments and public
agencies operate and make decisions, potentially laying the groundwork for enhanced citizen engagement that supports the inclusion of a wider range of life experiences in planning decision-making. A challenge in undergraduate planning education, however, lies in creating professional development activities that are accessible and enable undergraduate students to both explore and gain entry to planning careers. Purposeful integration of professional development pedagogy into undergraduate urban planning education can support these efforts (Keyes et al. 2023). Furthermore, knowing undergraduate planning student perspectives on professional development activities – and how these vary across students with different levels of work experience, family history with college (first generation) and demographics of students – can potentially help planning educators better meet the needs of undergraduate student populations and create pathways for underrepresented groups to enter the profession without obtaining a graduate degree. If our intent is to diversify the field to provide better representation, we need to prepare entry-level planners for a workplace that continues to grapple with inclusivity and discrimination (Garcia et al 2021). Unfortunately, the research on undergraduate planning pedagogy remains quite limited and could benefit from additional work on how to position undergraduate planning education as a vehicle for expanding accessibility to the field for a broader range of lived experiences.

In this presentation, we present the findings of a series of focus groups and a survey of undergraduate students enrolled in planning courses and recent alumni at a large public institution designated as an HSI/MSI. The exploratory study is guided by the following questions: How do undergraduate planning students perceive the value of different types of professional development activities? What are the impediments in moving from a planning degree to a job in the planning field? How do these impediments vary among different student groups (i.e. underrepresented groups, first generation, non-traditional students, gender, race and ethnicity)? Our preliminary findings suggest that students place a high value on gaining hard skills needed to support the technical aspects of planning jobs (i.e. GIS, data analysis in excel), which are commonly taught in planning programs. In contrast, many students report a lack of confidence in their soft skills (i.e., confidence, maturity, and communication), but these concerns are not as evenly distributed across student groups. The lack of soft skills may be a substantial barrier for planning students to integrate into the profession; soft skills are also instrumentally important for helping entry level planners develop successful planning careers. We use the results to shape a discussion on how pedagogical strategies can be leveraged to enhance soft skills of entry level planning students and to remove barriers to diversifying the entry-level workforce.

Citations


Key Words: Planning Education, Undergraduate Education, Professional Development, Diversity, Inclusion

DIGITAL EXPLORATIONS OF SUSTAINABILITY IN INDIA AND BEYOND: CREATING INTERACTIVE VIRTUAL FIELD TRIPS IN URBAN PLANNING AND GEOGRAPHY CLASSES
Abstract ID: 1108
Research in Motion (RiM)
As teachers in architecture, urban planning and geography, we help our students understand how urban planning can improve the everyday lives of people in cities around the world. Using experiential learning, such as field trips, to help students understand complex systems is an essential part of urban planning and geoscience education, yet there are many challenges in providing access such as cost, time constraints, and pandemic travel restrictions. Computer-based virtual field trips have been shown to bring some of the learning benefits of field learning to a broader range of students. With generous funding from the American Institute of Indian Studies we created virtual field trips to explore case studies of issues related to sustainability in cities in India. These case studies start with a focus on India and were created with consistent elements to be used as a template for crowdsourcing comparative case studies from students around the world. The VFTs are shared online and include interactive quantitative, qualitative, and spatial data on urban morphology, development conditions, social relations, and environmental sustainability.

Our project team created a web-based, open-access, crowd-sourced resource to share VFTs. The resource has dual purposes for college and university teachers: providing content on urban issues and sustainability through the existing shared VFTs offered on the site and providing an activity and template for students to create a VFT of a community they are familiar with to potentially share. The collection will be curated, teachers are asked to submit high quality VFTs, a representative image, and location that will be shared after approval by the GUSC project team.

Images and videos captured during our field experiences in India in 2019 and 2022 were used as the media in the VFTs. All images were edited for aesthetics and optimized for a balance of quality and fast loading speed on the web. Field notes and readings from the seminar were incorporated into narratives and supplemented with additional research to understand these issues in a broader content. Key terms are identified and defined. Maps were created in ArcGIS Online to allow deeper spatial exploration to these case. These included data layers on topics such as climate, demographics, agriculture, economics, and climate change. Custom graphics were developed to help enhance the learning material for visual learners. Our pilot VFTs utilized ArcGIS Online’s StoryMaps platform, a web-based application in which authors can combine maps with narrative text and other multimedia content. Additional teaching resources such as lesson plans and assessments are linked with each VFT. We also leveraged our work with the Global Urban Sustainable Center (GUSC), a non-governmental organization dedicated to advancing cross-disciplinary urban-focused research, civic engagement, and community support on issues relevant to living well in cities around the world. We developed a project team that consisted of the grant recipients, GUSC members such as Jit Kumar Gupta, an Indian urban planning and architect, and student volunteers at our universities.

The VFTs and teaching resources are offered and managed through the Geospatial Research and Information Laboratory at NAU and shared through links on the GUSC website, AIIS, and the CAORC Teaching and Educational Resources Page. We included flexibility in the guides for creating VFTs to remove technical barriers in varying learning contexts and foster greater accessibility. The prompts call for a narrative, multimedia, and maps offered on a web-based platform but the tools used to create them might differ based on the resources available to the students (e.g. ArcGIS, Google Maps, Open Street Map). Overtime, numerous projects will be added to this shared online resource allowing further analysis via comparison.

Citations

There is a push in higher education for interdisciplinarity in teaching. Yet, beyond the notion of transmitting knowledge from different disciplines into students’ minds, the process for doing so remains underdeveloped. As an interdisciplinary scholar, both in my educational training and as a professor, I should, according to the research, be more adept at taking on different disciplinary frames in my instruction and also more vigilant about frames that prevent the bridging of disciplines (Moore, 2012). However, when I was tasked with taking on a new course on engaging diverse communities in democratic activity, some important questions arose. After all, my interpretation of and approach to the course topic would influence how a classroom of future professionals would address this increasingly important aspect of their jobs. As such, I wondered: How do I develop a course that teaches students how to design systems for social change that include individuals from underrepresented communities? More specifically, how do I accomplish this in a class with students from a wide range of disciplines and who have no prior knowledge of design-based approaches?

After some reflection, I adopted an activity-centered design (ACD) (Gifford & Enyedy, 1999) approach to the course over a more traditional learning-environment design (Barab, Dodge, Thomas, Jackson, & Tuzun, 2007) or quasi-experimental design research, which in some circles is still held to be the normative standard for conducting pedagogical research (Brooks & Wu, 2011). This paper pushes on newer research-based approaches to designing and evaluating class practices. The focus of this paper is a class that functioned as both a seminar on theories of public engagement and a workshop in which student analyzed case studies and developed their own design ideas for engaging underserved communities in decision making across disciplinary fields and contexts. This paper is a reflective praxis piece (Waghid, 2001)—or a representation of my “reflection-in-action” (Schön, 1983, p. 50), in which I present my ontological and epistemological approach to ACD.

In reviewing students’ artefacts, this paper reports on the challenges students face with the course material, and where they excelled. I did so by looking at how they were making sense, tying class content to their chosen activities. From this overview I continued to reflect and identified three broad categories: imagination, reasoning, and application. From these categories, I reviewed students’ artefacts across assignments and saw three distinct patterns, which here I refer to as epistemic trajectories, related to how “knowledge [was transferred] from higher education to the appropriate sector of work” (Lahn, 2011, p. 63). The three trajectories were: linear progression, zig-zag growth, and non-linear. These trajectories were observed in the student artefacts created through the assignments, in-class activities, and triangulated with in-depth qualitative class evaluations.

Citations


Key Words: Interdisciplinary Teaching, Activity Center Design, Learning & Epistemic Trajectories

OVERCOMING OPPOSITION TO RENEWABLE ENERGY FACILITIES IN AMERICA: A NATIONAL CURRICULUM DEVELOPMENT AND CLINICAL EDUCATION INITIATIVE
Abstract ID: 1207
Research in Motion (RiM)

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The IRA, CHIPS, and IIJA promise to reduce US emissions by 40% largely by subsidizing clean energy investment and bolstering domestic supply chains. The urgency of the climate crisis calls for nation-wide mobilization, including a shift to Renewable Energy (RE) as quickly as possible. The Lawrence Berkeley National Laboratory projects that Renewable Energy Portfolio Standard (RPS) calls for roughly 90 GW of new RE capacity through 2030. But, there’s a problem. There is new evidence to suggest that local opposition is a key reason it has been difficult to implement RE projects as quickly as most analysts had assumed would be possible. So far, our team has identified 53 utility-scale RE projects that have been delayed or blocked between 2008-2021. These span 28 US states and include wind, solar, and geothermal power generating facilities. Combined, they represent approximately 9.6 GW of potential generation capacity (which equals roughly 10 percent of new RE capacity required to meet the RPS goals by 2030). This is the product of our initial search. We think there are more. What we have found is that local opposition is usually the product of multiple forces. By pinpointing how these local factors come into play, and how they interact, we believe it should be possible to avoid or resolve much of the opposition.

Our goal is to launch a Renewable Energy Facility Siting Clinic that can quickly train MIT students (and inspire students elsewhere) to help resolve utility-scale RE facility siting disputes when invited to do so by the parties involved. Our proposition is that many of these controversies arise and fester because the parties have no trusted neutral source to assist in joint fact-finding or collaborative problem-solving. Organized opposition groups have used lawsuits, political campaigns, appeals to regulators and lawmakers, and direct protest to block projects. Public reaction to small opposition groups expands quickly. As social scientists and urban planners, we are committed to facilitating collaborative efforts that will allow local stakeholders (especially RE developers, utility companies, communities, and Tribes) to resolve their differences. The key, in our view, is to bring them together in a “neutral setting” with proper joint fact-finding and mediation assistance. All the parties involved must believe that their participation in a collaborative problem-solving process of the sort that we propose to offer will allow them to meet their most important interests. There are many large-scale solar and wind projects that could benefit from carefully designed interventions before delay turns into cancellation. If we succeed, thousands of additional megawatts of electricity from renewable sources could be produced without having to wait for new projects to be proposed.
The clinic’s hands-on pedagogical model provides students with the technical tools needed to understand the role of renewable energy in the context of climate change. It also gives them an understanding of the complex social forces that speed up and slow down national efforts for decarbonization. If we train students to understand complexity and uncertainty — and to see the concerns of communities as legitimate — they will become well-equipped agents of change once they enter the labor market. These future practitioners in a low-carbon economy will hold equity and justice as guiding principles for global transformations that require but do not depend solely on technology and financial capital. Our approach enables an additional opportunity to catalog positive impacts of clean energy projects. The jointly agreed terms including compensation or other kinds of community benefits will be closely monitored by the university clinic. Our research goal is to quantify and publicize the wide range of positive impacts RE projects can have at the local level.

Citations


Key Words: Clinical education, Conflict resolution, Just energy transition, Renewable energy, Community benefits

EXPLORING LEARNING CIRCLES AS A TEACHING METHOD FOR TEAM BUILDING AND REFLECTION

Abstract ID: 1210

Research in Motion (RiM)

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This paper and presentation explore the use of learning circles as an approach to teaching team building and for facilitating reflective practice, two central learning goals for planning programs (the first of which is explicitly required by Planning Accreditation Board (PAB) standards). It presents a case study of the redesign and delivery an early graduate-level course on planning practice and ethics using learning circles to improve course and program outcomes around these two goals. The redesign was undertaken in response to feedback from both faculty and students at the end of the graduate program that identified the need for more explicit training in these two areas, particularly teamwork.

Planning practice often involves working as part of a team. In planning education, students are prepared for this through courses and assignments that require teamwork. In many programs, this includes a core or culminating workshop or studio experience. Despite many opportunities to work in teams in secondary school or undergraduate programs, students do not always arrive in a planning program prepared to form effective teams or to navigate the challenging interpersonal dynamics of teamwork. Indeed, they often arrive having experienced more dysfunctional than effective interpersonal dynamics of teamwork. Indeed, they often arrive having experienced more dysfunctional than effective team environments and are apprehensive about future teamwork. Students are often thrust into team environments with little instruction, with the belief that they either have already learned about teamwork or will figure it out by doing, a situation as likely to reinforce unproductive behaviors as productive ones. Reflection has been discussed in planning as an important skill to facilitate learning and ongoing
improvement, including for teamwork (Willson, 2021). Yet reflection, like teamwork, is often something that students are asked to do as part of a course, but there may not be explicit teaching, time set aside, or opportunities for group reflection. It may be difficult to find time for this teaching within a program given all the other important information and skills that must also be taught.

The above might not be the case at all planning schools, but were the circumstances at my school that led to the redesign of a second term (in a trimester system) course on planning practice and ethics. The teaching method chosen was learning circles. Learning circles use cooperative, team-based learning as a means to explore together significant questions or create a meaningful project. Research has consistently shown that people remember more details and understand concepts better when they learn by doing and discussing instead of passively listening. The approach is adapted from “literature circles”, a technique based on the idea and backed by experience that student learning gains are improved “when given choices, time, responsibility, a little guidance, and a workable structure” (Daniels, 2002, 1).

This paper describes the use of learning circles as a method for teaching and practicing both teamwork and reflective practice. In learning circles, students work perform a rotating series of roles that model important teamwork skills, while collaboratively working to investigate a problem. For the course discussed, these problems were weekly planning scenarios that prompted students to consider dynamics of planning practice and individually and collectively reflect on the ethical questions they raised. After describing the model and case, the paper uses student and instructor reflections to discuss the benefits and challenges of the model and suggest ways that planning faculty interested in the model might incorporate it into courses, with specific considerations of teaching in an online and hybrid environment.

Citations


Key Words: Learning circles, Teamwork, Reflective practice, Planning ethics
The challenge of bridging the ‘academia-practice divide’ is a perennial debate in planning (Durning 2004; Lord 2014; Goodman et al. 2017). The literature suggests that practitioners make limited use of academic scholarship (Taylor & Hurley 2016), even as digital transformations like social media provide new platforms to communicate research, and universities look to encourage more impact and engagement. Meanwhile, practitioner-focused journals such as the Journal of the American Planning Association, Town Planning Review and Australian Planner remain committed to publishing academic research for a practitioner audience (Forsyth 2020), but in doing so must navigate at-times contradictory academic expectations and practitioner needs.

Bringing together three current editors of practitioner-focused journals, this roundtable will examine the role of these journals in bridging the academia-practice divide, and how they might best adapt to meet future challenges. Topics for discussion include:

- What types of research and theory should practitioner-focused journals publish?
- How do researchers perceive practitioner-focused journals, and are there professional barriers to publishing in them?
- How do practitioners perceive the benefits and challenges of publishing in these journals, relative to other available outlets?
- Is open-access publishing helping to address issues of access to academic research?
- Do practitioner-focused journals need to adapt in response to the emergence of online research-translation outlets like The Conversation and academic blogs?
- What are the likely future challenges and opportunities for practitioner-focused planning journals?

Citations

HOW PLANNING CULTURE SHAPES URBAN MEGAPROJECT DEVELOPMENT: EVIDENCE FROM CHICAGO
Abstract ID: 22
Individual Paper

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Regardless of the socio-spatial setting in which they emerge, urban megaprojects exhibit similar features. These are mainly seen in architectural and urban design, neglecting the place identity but following the rules of transnationally accepted visual expression. In financial terms, megaprojects involve powerful economic actors, which tend to override the concerns of local authorities, citizens, and planning professionals. As the control mechanisms of urban megaproject development are usually weak, effective collaboration among the stakeholders with conflicting interests is difficult to achieve. Hence, megaprojects require attending to more than procedural instruments (rules and regulations). More precisely, awareness about deep-rooted factors, such as underlying beliefs, values, ways of doing things, and fundamental societal orientations, plays a crucial role in understanding the complexity of megaproject development. These two groups of factors – procedural and intangible – form a planning culture.

To explore how specific planning culture shapes urban megaproject development, we focus on the case of Lincoln Yards, a contemporary urban megaproject development in Chicago. Previously used as a privately owned industrial area in the close vicinity of the Chicago downtown, in 2017, the Framework Plan, i.e., a spatial vision for the future development of the broader area, including the Lincoln Yards, proposed the land-use change: from manufacturing district to mixed-use area. Considering the attractive position of the site, access to central infrastructural nodes, and a demand for new residential, office and recreational spaces (‘live, work and play’), the Lincoln Yards became the case coloured by great controversy and tremendous public attention.

To elucidate the case, we apply the actor-centric perspective to highlight the individual human capacity for social learning and possible incremental regulatory and institutional change. Using the in-depth qualitative case study based on documentary and discourse analysis and interviews, we explore individual visions, stakeholders’ everyday routines, and deep-rooted societal values as the core layers of an actor-centric planning culture model. More precisely, to assess these layers, we examine the following variables: professional argumentation and non-expert cognitive frames (‘ways of thinking’); level of stakeholders’ mutual trust and the extent of (joint) visions; current people’s practices and routine actions; the nature of the planning approach; power relations in stakeholders’ interactions; and, societal ideological orientations. By elucidating the nature of collaboration through the cultural lens, the case study, finally, provides some lessons learned to improve planning practice.

Citations

PARTICIPATORY PLANNING AND THE CHALLENGE OF POPULIST RHETORIC: REFLECTIONS ON MINNEAPOLIS 2040 COMPREHENSIVE PLANNING PROCESS

Abstract ID: 799
Individual Paper

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This paper discusses populist rhetoric in the context of participatory urban planning. While populism has been an oft-discussed theme in political studies recently, in the field of urban planning research populism has thus far remained a relatively marginal topic (Sager, 2019). There is evidence, however, that populism has shaped many planning projects in the US and beyond (e.g. Filion, 2011, Trapenberg Frick, 2013, Trapenberg Frick et al., 2015).

Populism is characterized, among other things, by its resistance to the establishment. This resistance is communicated through emotionally charged and passionate language. Populism seems to appeal to feelings rather than reason, especially negative feelings such as anger (Müller, 2016). The aim of populists is typically to build juxtapositions and tensions between groups of people, especially between the imaginary “authentic people” and the ruling “corrupt” elites (Müller, 2016), the elites often including public officials such as planners (Sager, 2019). Right wing populism, in particular, uses rhetorical means to demonize not only the elites but also marginalized groups such as ethnic minorities in cities and societies.

In this paper, our point of departure is that populist rhetoric forms a challenge to practicing urban planners as well as to the theories providing normative models concerning the interaction between planners and the public. These challenges are posed especially to the theory of communicative planning, which has established a view that planning disputes can be at least in principle solved by rational and argumentative communication. However, there are also theories such as the agonistic theory of planning that welcome passionate modes of expression and populist communication strategies. In this paper, we ask: What should planners do in the face of populist rhetoric amidst contradicting theories of planning? Should planners engage in fierce and emotional planning debates, as the agonistically oriented theories suggest, or should they rely on good argumentation, as the theory of communicative planning suggests, even when part of the public relies on populist modes of communication?

We look at these questions in light of theoretical literature, illustrating the discussion and testing the theories with examples of public input in recent Minneapolis 2040 general plan process. The goal of the Minneapolis 2040 process was to correct past planning policies that had led to a severe segregation of the city. However, the radical measures that the achievement of this goal seemed to require led to intense debates and the polarization of the public. We analyze populist rhetoric in the public comments on the Minneapolis 2040 plan, focusing on the “us-them” juxtapositions that part of the public aimed to create with their feedback to planners. “Them” has a dual meaning in our analysis: on the one hand, it refers to those groups of people that some people wanted to exclude from their communities/neighborhoods in their objections to certain planning solutions, and on the other hand, it refers to the planners, who were argued not to understand – or even want to understand – what the “authentic people” in Minneapolis want and need. Finally, we examine the strategies that the planners in Minneapolis had
pertaining to communication with the public, concluding that successful strategies vis-à-vis populism seem to include elements both from communicative and agonistic theories of planning. This is also the main takeaway of our study as regards the development of planning education, and in particular, the development of education related to public engagement procedures and practices in planning.

Citations


Key Words: populism, Minneapolis 2040, communicative planning, agonistic planning

HOW PLAN MONITORING IMPROVES PLAN IMPLEMENTATION: A LONGITUDINAL EVALUATION OF PLANNING IN YOUNGSTOWN, OHIO

Abstract ID: 827

Individual Paper

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There is always a “lag effect” in urban planning. Planners, in other words, shape tomorrow’s vision with today’s plan, based on yesterday’s knowledge. Lag effects cause plans to have a short life; plans remain unimplemented or only partially implemented. This situation has been called “new plan syndrome”, where planners are asked to prepare new plans without regard to why and when former plans became ineffective (Calkins, 1979; Talen, 1996).

Some scholars (Haynes, 1974; Quay 2010; Seasons, 2003) believe that plan monitoring provides an ideal solution to the “new plan syndrome”, as monitoring continuously evaluates implementation and adjusts planning with emergent, new information. However, plan monitoring is mainly treated as a tool for performance check, while its role of adjusting planning to offer new suggestions for implementation remains underexplored in planning literature. The questions of who is responsible for plan monitoring, and who it best serves, require more focused attention. Plan monitoring is resource-intensive and may therefore exclude certain organizations and groups from successful implementation of plan monitoring. Additionally, an entity that does have resources for plan monitoring may have differing priorities that influence which plan elements get monitored and which don’t. The questions of who monitors, how to monitor and what is monitored are crucial elements of this area of planning practice.

This study addresses these lacunas in the literature by examining neighborhood planning in the shrinking city of Youngstown, Ohio as an example of plan monitoring. Through Youngstown, the questions of who monitors, how to monitor, and what is monitored, are explored in detail. A longitudinal analysis of Youngstown’s quarterly-based neighborhood plan monitoring meetings between 2015 and 2017, and meeting recommendations for demolition are overlaid against demolitions suggested by earlier neighborhood plans and actual demolitions to compare how plan monitoring interacts with the original plans and implementation.
This study finds that in Youngstown, plan monitoring through neighborhood meetings was able to substantially ameliorate the endemic planning challenges of “lag effects” and uncertainty in plan implementation. This positive finding comes with qualifications. First, timing is critical to plan monitoring. In early 2015 when neighborhood plans (Plan) had just been released, plan monitoring meetings (Meeting) naturally focused on implementing Plan suggestions. In other words, there was no “lag effect”, and Plans remained relevant. As lag effect increased and Plans became less relevant, the Meeting process introduced new ideas. A growing number of demolitions began to conform with Meeting minutes instead of Plans, indicating the growing relevance of plan monitoring. By the end of the Meeting process in 2017, Plans were less significant as their demolition suggestions were decreasingly adopted. Instead, Meetings grew as a guide to demolition implementation, shown by higher conformance between Meeting suggestions and implementation.

The study findings lead us to offer the following guidance for those planners considering plan monitoring, as a conclusion to this study, on nine elements: Framework, Objectives, Process, Coordination, Data, Timing, Participants, Consensus, Re-evaluation.

Citations


Key Words: plan monitoring, neighborhood planning, plan evaluation, uncertainty, shrinking cities

INCLUDE, EMBRACE, AND ACCOMMODATE: A PLANNERS’ HANDBOOK FOR NEWCOMER COMMUNITY ENGAGEMENT

Abstract ID: 923
Individual Paper

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This paper is the culmination of a multi-year, multi-method study on engaging immigrant communities in planning matters in Canada. It presents key elements of a handbook available for the use of planning practitioners in all contexts where newcomers are sought to be included in planning-focused public decision-making processes. The methods informing the study include: 1. A scoping review that systematically analyzes the recent Canadian literature to determine which factors contribute most definitively to engaging newcomers in local decision-making; and 2. A series of 5 case studies, centered on the Greater Toronto Area (or ‘GTA’), which feature semi-structured interviews eliciting the knowledge and experience of planning practitioners who designed and carried out public participation activities on a range of themes and immigrant community members who may or may not have participated in these exercises.

The municipalities comprising the GTA—and by extension, Canada as a whole—offer an ideal environment in which to study these phenomena. Toronto lays claim to being the most diverse city in the world, following decades of immigration-driven growth; in the broader national context, Canada is now experiencing its highest annual
population growth rate—95% of which is accounted for by international migration—since the 1950s. In light of these demographic changes, and especially since the imposition of restrictions around in-person gatherings during the COVID-19 pandemic, local planners in the GTA have needed to devise more creative strategies to elicit the effective engagement of newcomer communities in planning in recent years.

In the growing literature on planning for diversity, traditional perceptions linger around how the ‘public interest’ is best determined by not prioritizing the needs or demands of any specific equity-seeking group (Burayidi, 2015). This is also reflected in notions of multicultural planning, which have not necessarily led to the development of a coherent vision of the ‘multicultural city’, but rather the “infusion of diverse forms and functions in urban institutions” and the “[grafting of] identities... into the existing urban structures” (Qadeer, 2015, p. 81).

Nevertheless, other perspectives point to the role that planners can play in assisting marginalized immigrant groups to take their rightful seat at the table in planning processes (Rios, 2015), which echoes support for a more ‘activist’ role for municipal practitioners to embody in order to advocate for the rights of newcomer communities and convene them in an array of environments through which their voices can best be captured (Sager, 2012).

The findings and analysis of this work form a comprehensive toolkit for the use of planning practitioners and community facilitators who seek to develop more robust systems for the inclusion of immigrants in their decision-making frameworks. While the handbook is replete with practical guidelines for planners to take into account when designing their engagement strategies, there are 3 key principles that practitioners are encouraged to consider. In essence, ‘include’ entails ensuring that the widest possible net is cast in order to invite newcomers to the consultative spaces being arranged. ‘Embrace’ points to the need for creating environments that are welcoming and infused with a spirit of acknowledgement and celebration of the range of ethnic and cultural populations represented, as well as communicating how valued participants’ contributions are and their vitality to the decision-making process. And finally, ‘accommodate’ speaks to a type of cultural competence that equips planners with the understanding, skills, and attitudes needed to best capture the diverse ways in which knowledge and experience are shared and generated. At the heart of these ideas is the benefit of developing a sense of ‘community’ to facilitate the uncovering of common ground among a range of diverse groups and the fostering of collective mobilization (Blokland, 2017).

Citations


Key Words: Immigration, Community Engagement, Equity and Inclusion, Municipal Government, Canada

RULE OF LAW AND COMMUNICATIVE PLANNING IN FINNISH PLANNING LEGISLATION

Abstract ID: 972
Individual Paper

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This paper examines two models of managing land use planning issues, both of which are manifested in the Finnish Land Use and Building Act (132/1999, LUBA). These are the idea of rule of law (or, more broadly, the constitutional state) and communicative planning. There are numerous interpretations of these concepts, but certain defining characteristics of both can be identified. The LUBA is first and foremost a legal instrument, but it simultaneously reflects the ideas of collaborative planning which had its heyday at the nineties when the law was drafted (see Mattila, 2020). The paper employs both theoretical and legal analysis.

There are evident tensions between these models of governance. Communicative planning is usually described as horizontal collaboration between stakeholders aiming for consensus through communication and deliberation. At the core of rule of law, however, lies the control of (public) powers – the neglecting of which is a common criticism towards communicative planning (see Westin, 2021). Under the rule of law, these (legitimate) powers can only be exercised by accountable public authorities, the relation between authorities and stakeholders thus being vertical.

There are, however, also parallels between the two. Democracy and participation can be seen as a fundamental connection when the rule of law is understood as the democratic rule of law. Even though democracy is conceptually not a necessary condition of rule of law, they usually exist in tandem and have close connections (see Waldron, 2008). Thus, both models set certain common requirements for planning processes, regarding the rights of information, rights to be heard and rights to active participation, for example (see Mäntysalo et al., 2011). Rule of law also requires, for example, that the decisions made by authorities can be called into question and appealed to be reviewed by a court of law. At heart, both pursue justness and democracy in decision-making.

When the rule of law is, as above, complemented with democracy and, usually, a set of fundamental rights, this complex can be called the constitutional state, another concept of numerous interpretations (see Christodoulidis, 2001). There are, for example, differences of opinion about the relations or possible hierarchy between the elements of the constitutional state. These kinds of questions bring forward the complex relations between law, democracy, and deliberation.

The collision of these two models of governance seems to produce practical consequences, too. It has been observed that stakeholders perceive the means of participation in the Finnish statutory planning system as sufficient or even good, while at the same time the chances of having an actual influence on planning decisions are seen as slim. One key reason for this, we argue, is that while planning procedures and practices emphasize communicativeness, the decision-making itself is defined by the rule of law. The planning process and decision-making are ultimately decoupled.

Citations


Key Words: Communicative planning, Statutory planning, Rule of law, Constitutional state, Constitutionalism
Climate change is a major issue facing coastal communities, and in turn, requires innovative responses to its implications. However, a strong federal climate change leadership is still largely lacking in the US. This, combined with growing public awareness, has led to more robust climate change planning at the state level (Alexander, 2020). Furthermore, the Disaster Mitigation Act of 2000 has set a requirement for states to prepare and update their hazard mitigation plans (approved by FEMA) every 5 years to be eligible for certain federal disaster funds and grants to help communities in mitigation and adaptation to hazards, including climate change. Berke et al. (2012) believe that hazard mitigation planning also has the potential to enhance the efficiency for mitigation funding and strengthen states’ capabilities for reducing hazard damages. It is, therefore, imperative for states to appropriately address the risks associated with climate change by incorporating them into hazard mitigation plans (Hu et al., 2018).

In this study, plan quality evaluation methods were used to assess climate change integration into State Hazard Mitigation Plans. Plan quality is defined as a measure of the strengths in plans that are assumed to facilitate implementation efficacy and measured through the degree to which plans are aligned with agreed upon plan quality components (Reckien et al., 2023). The components include the fact base; goals and objectives; policies, tools, and strategies; inter-organizational coordination; implementation; monitoring and evaluation; participation; and organization and presentation. Although scholars generally agree about the components that should be included in high quality plans, Guyadeen (2018) points out that a crucial missing part in this discourse is the views of planning practitioners, and that practitioners do not value these components equally. This study, therefore, addresses this gap by conducting a survey of planners in jurisdictions participating in climate change initiatives and utilizing the results to calculate and assign weights to the eight plan quality components and their corresponding indicators, which is a first attempt of its kind in plan quality research. There were 112 responses to the survey. Results showed that implementation; policies, tools, and strategies; and participation are seen as the most important contributors to plan quality by practitioners.

The sample for this study included the latest State Hazard Mitigation Plans in 22 US coastal states. The results of the evaluation show an overall medium quality in the studied plans. There is however, a large variation in plan quality by geographical regions, with states in the Northeast and the Pacific consistently having higher average component and total plan quality scores compared to states in the South. Correlation analysis with contextual variables shows that states with active GHG emissions targets, and those with higher population densities tend to have higher quality plans. Furthermore, states with higher dependency on energy, tend to have lower quality plans.

Findings from this study can be used in guiding state and local governmental officials, planners, community leaders, and researchers towards enhancing the quality of hazard mitigation plans, in general, and climate change considerations, in particular, and identifying best practices. The results can also be used to improve the tools and process of evaluating state hazard mitigation plans longitudinally as the plans are updated, and comparing the current quality of these plans with previous studies.

Citations


Key Words: Plan Quality, Evaluation, Climate Change, Hazard Mitigation Planning

BEYOND PARTICIPATION: ASSESSING THE ROLE AND INFLUENCE OF COMMUNITY STAKEHOLDERS IN COMMUNITY-LED CLIMATE PLANNING IN ENVIRONMENTAL JUSTICE COMMUNITIES
Abstract ID: 1285
Individual Paper

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Scholars and planners argue that involving community stakeholders in planning processes leads to plans that better address local needs. Others, however, cite evidence of structural inequities and power imbalances limiting the ability of community involvement to lead to more equitable outcomes, especially in under-resourced communities. This paper describes the multiple ways in which impacted communities are being involved in local climate planning processes, and analyzes the relationship between community involvement and climate planning outcomes through an environmental justice framework. A case study of California’s Transformative Climate Communities (TCC) Program is presented as a prominent example of community-led climate planning. TCC funds neighborhood-scale climate planning in some of the state’s most pollution-burdened communities. Planning documents and in-depth interviews with local government staff, community leaders, and residents are used to identify different levels and types of community involvement used in the development of the successful TCC grant proposals and to identify patterns between community involvement and climate planning outcomes (measured as funded projects). This study will contribute to a gap in the literature on participatory planning by describing the range of roles and influence of civil society actors within community-led climate planning processes. The findings from this study will also contribute to the urban environmental and climate justice literatures by critically analyzing the relationship between types and levels of community involvement and environmental justice outcomes on the ground.

Citations


Key Words: participatory planning, climate change, community stakeholders
DO THE SUBURBS HAVE LESS COMMUNITY ENGAGEMENT? EVIDENCE ON SPRAWL AND SOCIETY FROM EUROPE
Abstract ID: 65
Individual Paper

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Critics argue that suburban "sprawl" has eroded civic and community life, due in part to fewer neighborhood social interactions while walking, and to more cocooning in automobiles. Putnam (2001) argues there is a ‘‘sprawl civic penalty’ of roughly 20 percent on most measures of community involvement.” However, others (Brueckner and Largey 2008; Glaeser and Gottlieb 2006; Morris and Pfeiffer 2016; Williamson 2002) fail to find this.

We examine suburbanization in Europe, an understudied area. While urban structure in Europe has historically been denser and more compact than in the U.S, European cities have witnessed substantial suburbanization, particularly in the postwar era.

We use the European Social Survey (ESS), a large-scale project which measures myriad beliefs, behaviors, and individual characteristics. The ESS’s location variable includes the categories “suburbs or outskirts of a big city” and “big city,” the geographies on which we focus. The sample includes about twice as many city dwellers as suburbanites. A probit model shows that suburbanites tend to be male, married, living in larger households, wealthier, citizens, lower in education, and living in ex-communist countries.

The survey has been conducted in 10 rounds between 2006 and 2020. Roughly 50,000 responses are collected per round. Some questions are asked in all rounds, while others are only in a subset. Therefore, our models vary in sample size and countries, depending on the dependent variable.

We use OLS, probit, and ordered probit regression. We control for demographic variables, and also country, survey round, and whether the subject lived in a post-communist country. We use weights that adjust for sampling probabilities, nonresponse, and country population.

We test social connectedness in both the formal and informal senses. First, we look at participation in organizations. Most questions about this were in only one module, so our sample sizes are smaller. Here we find the sole example of greater social connectedness for city dwellers, who reported being more likely to have participated in religious activities. We find no evidence of differences in participation in nonprofit, professional, educational, social, sports, labor union, or local organizations.

In models with larger sample sizes (over 100,000 from 38 countries), our results show no significant differences in participation in political organizations, but, counter to the prior findings, significantly higher participation in non-political organizations by suburbanites and no greater participation in religious activities for either group. We find no significant differences in the frequency of informal socializing, and in terms of beliefs we find no evidence of differences in the propensity to trust others or feel it is important to help others.
Noteworthy differences do appear, however, in terms of subjects’ perceptions of their communities’ social fabric. Suburbanites worry less about crime and are more likely to feel that those in their local area help each other. Additionally, they are borderline-significantly more likely to feel “close” to their local area.

Do these perceptions matter? To gauge this, we examine subjective well-being by geography using a variable reflecting subjects’ life satisfaction and another variable reflecting how “happy” subjects feel. In our base model, we find people in suburbs are significantly more likely to be satisfied with their lives, and are borderline-significantly happier than urbanites. Including the measures of neighborhood fabric, we find that less fear of crime, a sense that locals help each other, and feeling close to the area are all strong predictors of well-being. In these models, suburban living is still significantly and positively associated with life satisfaction, suggesting that it has direct positive effects on well-being, plus positive effects that are mediated by stronger community social cohesion.

Citations


Key Words: Suburbanization, Socialization, Well-Being, Community

IDENTIFYING THE SPATIAL PATTERN OF RURAL ECONOMIC DEVELOPMENT AND ITS LAND SUPPLY MECHANISM IN CHINA’S METROPOLITAN SUBURBS: THE CASE OF SHANGHAI

Abstract ID: 167
Individual Paper

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[Research Background] In the context of globalization, the reshaping of rural space by the impact of industrialization and urbanization has attracted widespread attention from international scholars. The "rural revitalization" strategy put forward by China has gradually shifted the focus of rural construction to the cultivation of endogenous development. The integration and development of rural industries have profound impacts and substantial demands on rural spatial structure, layout, and quality. Due to the two-way impact of urban expansion and rural attribution, rural space in the suburbs of metropolitan areas is more prone to differentiation and transformation of its industries and functions compared with ordinary rural areas.

[Scientific Questions] Therefore, this research asks what are the characteristics of the spatial pattern of rural economic development in China’s metropolitan suburbs? What kind of differences in industry orientation exist in different rural economic typologies? What are the differentiated development needs and land supply needs of different industries? What kind of land supply strategies correspond to different land supply demands?
[Research Methods] To answer these questions, firstly, the theoretical framework of the spatial pattern of rural economic development in metropolitan suburbs and the analytical framework of the land supply strategy of rural industries are constructed. Moreover, the differentiation characteristics and formation mechanism of the circle-like structure of rural regional economic space in suburban Shanghai are analyzed, and according to different industrial development types, typical cases are selected for in-depth analysis based on field survey and interview with key informants, in order to explore how the land supply strategy of planning practice meet the differentiated needs of industrial development.

[Research Findings] The preliminary findings reveal that there is an obvious circle-like structure in the spatial pattern of rural economic development in metropolitan suburbs, which can be categorized into entrepreneurial economy, dependent economy and rent-competitive economy and can be analyzed through the conceptual model by the analytical framework of "space—function—industry". The industrial development needs of entrepreneurial economy, dependent economy and rent-competitive economy in suburban Shanghai are to construct the integration chain of characteristic industries, to undertake the spillover of urban functions, and to cultivate the local root and driving ability of rural industries, respectively. Therefore, the land supply of industries have diversified demands such as the modernization of agricultural production space, the spatial upgrading of the whole industrial chain, and the commercialization of rural space. The corresponding land supply strategies include farmland regulation, ecological restoration, the marketization of land factor, and overall planning in the whole region.

[Practical Significance of Planning] Accompanying continuous deprivation of rural space by rapid urbanization, the contradiction between industrial development demands and land resource constraints has become the most important factor restricting rural development in contemporary China. The goal of this research is to provide policy implications for the rural development in metropolitan suburbs wishing to cultivate the endogenous rural development, and to guide the planning practice in China and other developing countries with similar policy contexts.

Citations


Key Words: rural regional function, spatial differentiation, industrial space supply, metropolitan suburbs, Shanghai
This paper investigates the use of accessibility concepts and metrics by metropolitan planning organizations (MPOs) in regional transportation and land use planning. Traditionally, MPOs have mostly been charged with only transportation planning, and for a long time, focused on improving automobility. Many scholars have argued for a shift to an accessibility framework, and MPOs have increasingly incorporated accessibility in their regional plans, but in ways that are often ambiguously defined and poorly operationalized. Such halting progress may be explained by several factors, including technical and political obstacles.

In this study, I explore the use of accessibility concepts and metrics by seven California MPOs through archival research and interviews to answer two main questions: 1) how MPOs use accessibility concepts and metrics in shaping regional transportation and land use systems; 2) what the obstacles and, more importantly, facilitating factors are for MPOs in applying them to their work. I intentionally focus on California MPOs because they have land use planning duties on top of the federally mandated transportation planning functions, and thus are better positioned to make use of accessibility metrics to coordinate transportation and land use investments to address climate, transportation, and equity goals. The sample represents different sizes and levels of organizational capacity and different regions, which may affect how MPOs use accessibility in their planning and programming tasks.

I first review the MPOs’ most recent regional transportation plans (RTPs), sustainable community strategies (SCSs) and transportation improvement programs (TIPs) to find evidence of the use of accessibility concepts and metrics. The content analysis focuses on three main questions: 1) how accessibility is defined; 2) whether and how much accessibility concerns are reflected in the goals and objectives of the plans and considered in project selection and programming; 3) whether and how much accessibility metrics are used in performance evaluation of the regional system and specific projects. I will then interview two to three staff from each MPO who participate or oversee the development of regional plans and/or project programming to ask about the factors that facilitate and/or limit the use of accessibility metrics.

The archival research has generated some preliminary findings: 1) most MPOs are de-emphasizing automobility and prioritizing maintenance over expansion of their freeway and road systems, while emphasizing mobility via non-car modes by investing in transit and active transportation infrastructure; 2) most MPOs also encourage more compact and mixed-use land use patterns – especially near job centers and areas with abundant transit services – to reduce auto-dependence; 3) while both trends above represent a shift away from the focus on auto-mobility and may in effect increase multi-modal accessibility, these changes are largely driven by the state’s VMT reduction goals to reduce greenhouse gas emissions rather than the adoption of an accessibility-focused framework; 4) larger MPOs are using accessibility metrics in performance evaluations more than smaller ones and the metrics they use tend to be more sophisticated.

This study addresses the understudied topics of the application of accessibility to regional land use planning and in project programming processes. Moreover, this study will explore the technical and political obstacles that MPOs face, which has a key implication: if the major obstacles are technical, then more research about how to operationalize the concept in practice would be the priority; if, on the contrary, the major obstacles are related to the limited authority and capacity of MPOs, then findings about innovative practices at the MPO level to increase its ability to influence decision making would offer valuable lessons.

Citations

CAN URBAN FORM AND SPATIAL PATTERNS MITIGATE THE URBAN HEAT ISLAND EFFECT? EVIDENCE FROM GERMAN METROPOLITAN REGIONS

Abstract ID: 282
Individual Paper

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The urban heat island (UHI) effect refers to the phenomenon of higher temperature in urban areas compared with less dense, outlying areas. Studies have found that the UHI effect contributes to increased air pollutants and energy consumption, and presents serious risks to public health by magnifying the severity of heat waves that increase heat-related mortality and morbidity (Debbage and Shepherd, 2015). Notably, low-income and marginalized communities are particularly vulnerable to high temperatures due to a lack of access to green spaces and cooling resources.

City planners have engaged in long-standing debates about whether well-designed urban form and urban spatial configuration can diminish the UHI effect. On the one hand, higher-density and more aggregated urban development is generally associated with higher urban temperature, as the mechanisms causing the UHI effect are more pronounced within dense urban cores. However, recent studies have paradoxically concluded that sprawling configurations, characterized by low-density and fragmented development, may also exacerbate UHI intensity by generating more impervious surface and increasing heat per capita (Stone et al., 2010). This contradiction has resulted in a dilemma over best management practices, requiring further evidence to evaluate whether denser and more aggregated urban growth is a viable solution to UHI mitigation, or whether it merely exacerbates the issue compared with lower-density and more fragmented development (Debbage and Shepherd, 2015).

This study aims to evaluate the impact of urban spatial configuration on the UHI effect and to identify the most appropriate urban form for mitigating it. We also investigate the cooling effect of urban green spaces on urban heat, as there is limited knowledge regarding the size, shape, and distribution of green spaces required for efficient UHI mitigation. We utilize German metropolitan regions (Großstadtregionen) as the basic spatial units to define urban and rural areas and rely on MODIS land surface temperature (LST) product to obtain both daytime and nighttime UHI intensities. Eleven landscape measures are quantified using R package landscapemetrics, covering three broad dimensions of urban form, including fragmentation/aggregation, shape complexity, and polycentricity (McGarigal, 1995; Herold et al., 2002). Finally, we employ both naive and multi-variable regression analysis to explain and interpret the influences of urban form and greenspaces on reducing the UHI effect.

We find that spatial aggregation and contiguity of urban spatial patterns can significantly aggravate urban heat intensity, whereas shape complexity and degree of polycentricity are less influential. This underscores the potential for contiguous and uninterrupted urban footprints to increase urban temperatures. In contrast, more fragmented and patchier urban green spaces have greater potential for reducing urban heat, compared with more aggregated and contiguous green spaces. Our results suggest that simply increasing urban densities may not be a viable approach to mitigate UHI effect. Instead, spatial planning policies should promote more scattered and smaller urban green spaces throughout the urban fabric, which can not only reduce urban contiguity but also provide additional cooling effects, as compared to single, larger green spaces.
EVOLUTION CHARACTERISTICS OF INNOVATION NETWORKS IN SHANGHAI METROPOLITAN AREA AND ITS IMPACT ON REGIONAL INNOVATION DEVELOPMENT: AN EMPIRICAL STUDY BASED ON PATENT COOPERATION NETWORK

Abstract ID: 376
Individual Paper

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Since the global financial crisis in 2008, China has planned to build many metropolitan areas with national central cities as the core in order to promote internal economic cycle and endogenous innovation and development, which have become the spatial carrier for promoting innovation transformation and promoting regional integration. As an important model for leading global technological development, innovation networks have become an important tool for achieving regional innovation cooperation and promoting local innovation development. Existing research on China’s regional innovation networks is mostly conducted from a global and national perspective, exploring issues such as network structures and impact mechanisms such as innovation cooperation at the prefecture level and above, while less research has been conducted on more detailed spatial scales at the metropolitan level. Based on the theory of "local buzz-global pipeline", using patent cooperation data from 2010-2019 to construct innovation cooperation networks at the district and county levels, analyze the innovation correlation characteristics and pattern evolution of China’s largest and most economically developed metropolitan area, the Shanghai metropolitan area, and explore the external effects of the internal and external structures of the network on urban economic development. The results show that: (1) In the past decade, the Shanghai metropolitan area has formed a mature network with Shanghai as the core and other urban centers as secondary nodes; The network density, network connection strength, and network efficiency of innovation networks within the metropolitan area are continuously increasing. (2) Innovation cooperation networks gather within districts, counties, and cities. Intercity innovation linkages within metropolitan areas mainly rely on core innovation nodes within the city, forming a pattern of interwoven internal close ties and external core corridors. (3) The internal and external structures of innovation cooperation networks work together and have a significant impact on regional economic development; Among them, the improvement and balance of innovation networks within cities can contribute to regional economic development, while the degree to which cities integrate into regional innovation networks can both promote their economic development and have a restraining effect due to their excessive dependence on surrounding cities. The research conclusions have various policy implications for planning strategies in China’s planning and construction of metropolitan areas, such as reasonably constructing intercity innovation cooperation networks, and optimizing the local innovation environment.
Citations


Key Words: Innovation cooperation network, Evolutionary characteristics, Internal and external networks, Innovation development, Local buzz and global pipe

REVISIT LAND USE SUSTAINABILITY USING SPATIAL EQUILIBRIUM: EVIDENCE FROM CHINA’S HIGH SPEED RAILS DEVELOPMENT
Abstract ID: 401
Individual Paper

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Seeking sustainable growth and improving people’s wellbeing are goals for every accountable government. In the field of planning, sustainable development is widely recognized as a participation-oriented planning process enabled by a planning mandate from higher level government. However, it remains less studied how the effect of this argument can be measured. This question is important because what planners need are both a benchmark to evaluate whether a comprehensive planning helps and an how it helps. This study investigates this question by introducing spatial equilibrium to examine how a city’s sustainable growth can be met via urban land use. Using China’s high-speed rail (HSR) development, which is an ideal case study for inter-regional spatial equilibrium, this research investigates how land use change in the past decade improves people’s quality of life and alters firms’ business cost structure coupling with this regional transportation infrastructure expansion. By adopting time-varying difference-in-difference method, the paper investigates the statistical association between changes in city’s total factor productivity (TFP) and land use changes that promoted public well-being (as a proxy of quality of life) and firms’ cost efficiency before and after the connection to the HSR network. Based on an analysis of detailed land transaction data covering 347 cities across ten periods (2010-2019), the study shows that (1) the sprawling HSR grids target the expected city productivity growth through land use for industrial upgrading and real estate development; (2) Instead of an increasing number of HSR passengers, city’s productivity growth was slighted enhanced by land use for public amenities and firms’ cost structure, which are found to pay higher to run business at cities connected by HSR network; (3) The results reveal the nature of low efficiency in economic growth amongst Chinese cities considering the small increase in people’s quality of life and enormous cost in HSR grids expansion via land use. Research findings provide innovative lens for planners to measure sustainable land use. The results offers important policy implications for a sustainable planning on land use toward a high-quality and sustainable development that better serves public- and private-sector needs.

Citations

RURAL DEVELOPMENT AND PLANNING STRATEGIES DRIVEN BY LOCAL INDUSTRIES IN THE SHANGHAI METROPOLITAN AREA: A CASE STUDY OF SHANGHAI, SUZHOU, JIAXING, HUZHOU

Abstract ID: 431
Individual Paper

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Global industrialization and urbanization have led to rural marginalization and inequality, stemming from the unequal exchange relationship between rural and urban areas, which makes rural development a pressing issue. Existing theories mainly explain the driving mechanism of rural development from two perspectives “endogenous” and “exogenous”. However, practice in the world for nearly a hundred years has proved that either model alone can’t be successful. There is still a lack of systematic theoretical explanations on whether the endogenous model and the exogenous model can form a synergy and how to realize it. It is also difficult to provide effective guidance for related practical work.

This article focuses on the rural areas of Shanghai, Suzhou, Jiaxing, Huzhou in the Shanghai metropolitan area, looking for “the third path” of rural development between the exogenous model driven by urbanization and the localized endogenous model. From an economic perspective, we focus on urban-rural linkages through local industries, establish a unified explanatory framework for the mechanism of the endogenous and exogenous factors of rural development, that is, an urban-rural network analysis framework based on industrial linkage. Through literature and Internet data retrieval, economic census data analysis, questionnaire surveys, in-depth interviews and spatial analysis, this article establishes a case database of typical villages for rural revitalization in Shanghai, Suzhou, Jiaxing and Huzhou, based on which two-level empirical research is conducted: The first is to search for local industries that are closely related to the rural areas of the four cities above, and explore the urban-rural relationships based on different types of local industries (agriculture with local characteristics, manufacturing, leisure and health industries) and their network associations; The second is to select representative villages and towns based on different leading industries, analyze the driving mechanism of rural development from the two industrial linkages of vertical and horizontal networks, and focus on the key elements for the network linkages in different types of rural development.

The research shows that the economic development level of the villages in the Shanghai-Suzhou-Jiaxing-Huzhou area is relatively high, and diversified types of local industries have been formed based on local resource endowments, among which a large number of villages have established a relatively close industrial relationship with Shanghai. According to the urban-rural network analysis framework based on industrial linkages, the reason for the sustainable development of some rural areas is that, on the one hand, the relations based on upstream and downstream industrial chains or commodity chains have been formed across the administrative hierarchy between the countryside and Shanghai, which form a vertical network connection based on the industrial foundation. On the other hand, an innovative form of industrial organization has been formed among local farmers, enterprises, cooperatives, local governments, and multiple entities outside the local area, which constitutes a horizontal network connection. Further, some key elements, including characteristic local resources, local capable people, and the innovative governance of the government, play a role in linking vertical and horizontal networks. Among
them, the local characteristic resource elements are the basic point and original driving force for the network linkages. The leading roles of local capable people or foreign talent elites are often the core of industrial organizations, and the government's innovative governance has become an important driving force for the formation of network linkages. The existence of these elements ensures that rural areas have become a development system driven by vertical and horizontal network linkages. Finally, the thesis further discusses the rural development function guidance in the metropolitan area and the model and the rural development model and planning strategy driven by different leading industries.

Citations


Key Words: Metropolitan area, Rural development, Industry relations, Urban and rural network, Planning strategy

AGE-FRIENDLY SHRINKING CITIES IN THE GLOBAL NORTH

Abstract ID: 474
Individual Paper

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Shrinking cities have emerged as a lasting global phenomenon. Economic restructuring, demographic change, armed conflict, and climate migration all continue to reshape global, regional, and local population dynamics. Demographic aging is simultaneously changing population structures at every geographic scale. Over time, the distinct and overlapping trends of shrinking and aging begin to reinforce one another, resulting in accelerated population loss. In advanced economies, shrinkage is often felt most acutely at the local level where planners and decisionmakers must reimagine and reshape cities for a smaller population with a smaller tax base. Despite the widespread nature of shrinking cities, research generally remains siloed in individual countries or regions. Without a broad international understanding of shrinkage trajectories, it remains a challenge to interpret similarities and differences across contexts, anticipate pan-national trends, and gauge the mobility and applicability of policy. Our research aims to provide an empirical foundation to the local trajectories of the global processes of shrinkage. Specifically, we ask: How does the prevalence, persistence, and severity of shrinkage compare across cities and regions in the Global North? What is the relationship between aging and shrinking populations? And what does that mean for the future of shrinking cities? What are the implications for planning practice and policy?

We use the Organization for Economic Co-Operation and Development’s definition of a functional urban area and population data from the European Commission’s Global Human Settlement Layer to compare spatial temporal trends of population loss at the urban core and regional level from 1975 to 2020 across 35 Global North countries. Additionally, demographic structure data from WorldPop is used to gauge the state of population aging in 2020 in all functional urban areas. Shrinkage is defined using the past peak population operational definition. Aging is defined as the population over the age of 65 years old.
The results demonstrate the pervasive nature of shrinkage and the distinct spatial, temporal, and scalar patterns of population loss and aging. Of the 1,183 functional urban areas across 35 Global North countries, 41% had shrinking urban cores, 38% had shrinking regions, and 34% had both shrinking urban cores and regions. Countries experiencing the highest levels of shrinkage were predominantly clustered in post-Eastern Bloc Europe, Southern Europe, and Asia. In terms of absolute numbers of shrinking cities, the USA had the most, followed by Japan, Spain, and Italy. Only six countries did not have any shrinking urban cores or regions (Austria, Canada, Iceland, Luxembourg, Norway, and Sweden). Shrinkage was also found to have intraregional and scalar differentiation. On average, core shrinkage from peak population was higher than regional (4.9% and 4.1%, respectively). Smaller regions (population less than 250,000) lost, on average, 5.3% of their peak population, whereas midsized regions (population 250,000-500,000) lost 2.1%, and large regions (population 1,000,000 and above) lost only 1.6%.

The demographic structure of shrinking regions and cores were found to be significantly older than their growing counterparts. Moreover, we found a significant positive correlation between population shrinkage and the proportion of older adults. Places with higher levels of shrinkage had higher proportions of older adults. This is especially true in countries like Japan, where advanced population aging and age-distinct migratory patterns have led to high levels of shrinkage in smaller and more peripheral cities and regions.

Together the empirical findings paint a nuanced picture of the spatial, temporal, and scalar patterns of population loss and aging across the Global North. Using these findings, we discuss and compare contextual planning implications of population loss and aging, opportunities for international collaboration and knowledge exchange, and the distinct spatial challenges of planning the age-friendly and shrinking city.

Citations


Key Words: shrinking cities, aging, Global North

**NAVIGATING THE TIGHTROPE: TERRITORIAL PLANNING FOR HIGH-TECH GROWTH AND ECOLOGICAL SECURITY IN TAIWAN**

Abstract ID: 641

Individual Paper

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Globalization, geopolitics, and climate change have led to increased urbanization and a strain on key resources such as water, food, and energy. Governments around the world are pursuing integrated policy and regional planning to coordinate responses across sectors and levels of government to manage the tension between economic development and environmental protection. For Friedman and Weaver (1979), this paradigm shift in regional planning is evident in the competing pressures for “functional” integration into the global space of economic flows, which emphasize specialization within the global division of labor, and “territorial” integration,
which emphasizes self-reliance, environmental protection, and less dependence on transnational linkages.

These tensions were recently highlighted in the context of Taiwan’s 2021 drought, which impacted the country’s resource-intensive semiconductor (and other high-tech) industries. With nearly 90% of the advanced semiconductor market concentrated in Taiwan, the event highlighted key vulnerabilities in global technology supply chains in the midst of other disruptions caused by the COVID-19 pandemic, an ongoing technological conflict between the United States and China, and growing uncertainty about the medium- and long-term economic and ecological impacts of climate change. The convergence of these factors has also highlighted issues related to increased high-tech industrial development as a result of US sanctions against China. While the expansion of industrial areas has been a key driver of Taiwan’s economic development, it has also sparked widespread public concern about the environmental risks associated with high-tech industries. Civic debate over industrialization’s environmental issues has been an important aspect of political democratization, and new regional planning institutions must reconcile the goals of economic development and ecological security.

This study analyzes the political, economic, social, and ecological factors affecting regional planning in Taiwan, focusing on a newly implemented planning process with the passage of a National Spatial Planning Law and the Forward-looking Infrastructure Development Program in 2016. These programs aim to develop a more democratic and inclusive planning framework with input from local municipalities and indigenous communities while enhancing economic and ecological security. However, the need for land, energy, and water resources for high-tech industrial development conflicts with food security and agricultural livelihoods. Relatedly, the institutional division of land governance is split between the Ministry of Interior, the Ministry of Economic Affairs, and local governments, which have divergent priorities, adding to the difficulty in achieving resilience and sustainability.

Using a mixed-methods approach that includes data sources from historical archives, government statistics, geospatial analysis, expert interviews, and field visits, this study examines three interconnected security challenges for Taiwan’s evolving regional planning system. First, the ongoing, fragmented nature of high-tech industrial expansion for economic security has placed strains on Taiwan’s energy and ecological security. Second, demographic shifts and pressures on agricultural land for industrial inputs have placed strain on livelihoods and exacerbated Taiwan’s food insecurity. Finally, climate change and increasing demand for resources have pushed ecological conservation to its limits, leading to conflict with indigenous communities over land use and water security.

In the face of these interconnected challenges, this study emphasizes the importance of institutional design within regional planning to coordinate policy responses across sectors and levels of government. To ensure sustainable regional development, Taiwan (and other places) must find ways to balance the competing demands for land, energy, and water resources and prioritize environmental sustainability over blind economic growth. To ensure that the most vulnerable have a voice, planners will have to deal directly with the fragmented and conflict-ridden institutional structures that underpin regional planning and land use management.

Citations


Key Words: Territorial Planning, Institutional Change, Ecological Security, High-tech Development
CROSS-SCALE DOMAIN CLUSTERING FOR IMPACTS OF SUBURBANIZATION ON HYDRO-VEGETATION INTERFACE IN GWINNETT COUNTY, GEORGIA

Abstract ID: 642
Individual Paper

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Gwinnett County, Georgia had a remarkable suburban growth in the past 30 years. After the historical lessons which planners had learned from the urban sprawl in cities such as Houston and Los Angeles, mixed used and medium density developments became a more acceptable and sustainable strategy for a greener future. However, the suburban expansion of Gwinnett County is still in a relatively low density, causing forested areas along stream corridors to degrade over time. Within this area, suburban developments threaten stream corridors which are critical wildlife habitat and key ecosystems. The major research question is how to efficiently identify suburban development trajectories and suburban hydro-vegetation interface degradation based on remote sensing, GIS, and ecological variables. In previous studies, clustering analysis has been providing exploratory paths to reveal latent spatial problems. This study proposes an ecological planning perspective investigating the vegetation degradation and land cover change at the census block and the census tract scales. This study investigates three domains for clustering analysis: 1) land cover (vegetation and impervious surface change), 2) spatial division (road density), 3) habitat area change based on species distribution models. The land cover domain directly shows development intensity. The spatial division domain derives from landscape connectivity and the road network being a major barrier. The habitat area analysis informs a bridge between species distribution modeling and ecological planning and development. This study tests 10 data compositions for clustering analysis covering three domains and three timestamps at two spatial scales. K-means, DBSCAN, and SOM models are compared. Years 1985, 2000, and 2022 are defined as three timestamps. This clustering result is discussed with population density, aiming to identify suburban development trajectories around the hydro-vegetation interface. The result of this study informs future policy making for suburban hydro-vegetation interface conservation, where the future policy is expected to be customized for blocks and neighborhoods. Future works following this study can apply graph attention network for planning prediction.

Citations


Key Words: clustering, suburbanization, vegetation, stream
THE ROLE OF DIGITALIZATION OF PRODUCTION IN SHAPING URBAN INDUSTRIAL LOCATIONS

Abstract ID: 662
Individual Paper

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In recent years, smart factories have emerged as a result of digital technologies such as big data, IoT, AI, 3D printing, and robots. These factories are designed to achieve innovation and optimization of production methods and adapt to changing market demands such as personalized production and regionalization trends (Busch et al., 2021; Herrmann et al., 2020). This digitalization of production can have positive effects on various aspects of manufacturing, including production efficiency, product quality, environment and safety, and energy saving. Moreover, it has the potential to cause significant spatial restructuring, such as the “re-urbanization of industry” or the “re-industrialization of cities” (Gornig & Werwatz, 2018, Park, forthcoming). By enabling downsizing of production and warehouse space and improving productivity per unit of product or area, digitalization of production can increase the potential of urban location (Busch et al., 2021; Herrmann et al., 2020; Matt et al., 2020; Park, forthcoming). This possibility has significant implications for urban industrial location and industrial spaces. However, while there has been much theoretical discussion regarding the effects of digitalization of production on urban location, empirical research in this area is very limited.

Therefore, the primary aim of this study is to empirically examine whether the digitalization of production at the establishment level increases the urban location tendency by downsizing the factory and improving productivity. To achieve this goal, this study extracted information on the digitalization level of production, the area of production space, and productivity of 1,750 establishments from the 2020 Survey of the Information Level of SMEs conducted by the Korea Technology and Information Promotion Agency. The urban location index for each establishment was calculated using the modified gravity model, and the location pattern for each establishment was analyzed using GIS. In addition, by using the multi-level regression model, this study analyzed how the digitalization of production is associated with the urban location, as well as space efficiency and productivity.

The analysis results showed that establishments with high digitalization, small production size, and high land productivity exhibited a considerably strong urban location tendency compared to establishments with low digitalization, large production size, or low land productivity. This finding highlights the role of digitalization of production in shaping urban industrial locations and their surrounding environments. Furthermore, the results of the multi-level regression model indicated that the digitalization of production not only had a positive effect on space efficiency and productivity but also increased the tendency of urban location. Based on these findings, this study discussed several policy implications for urban industrial location and urban industrial spaces.

Citations

FACTORS OF URBANIZATION AND RURALISM AFFECTING RURAL GROWTH

Abstract ID: 665
Individual Paper

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In the past, rural studies have focused on the dichotomy between urban and rural area, with distinct characteristics such as agricultural production, traditional lifestyles and communities, natural environments and landscapes, and cultural resources. However, as cities have grown in influence, a need for rural development strategies that take into account their relationship with urban areas has emerged. The OECD's Rural Policy 3.0 has emphasized the importance of such strategies, aligning with planetary urbanization theory, which focuses on extended urbanization that connects cities to large-scale circuits of labor, goods, cultural forms, resources, energy, and agriculture beyond their physical boundaries.

This study aims to empirically verify the proposition of planetary urbanization theory that rural population growth will occur in areas with a large influence of central cities during expansionary urbanization. Additionally, we seek to identify the factors of rurality that make rural areas grow despite the small influence of central cities due to physical distance. To this end, we statistically analyze demographic changes in rural areas in South Korea from 2015 to 2020, as well as accessibility to major metropolitan areas, and factors of ruralism such as productivity, natural conservation, and communities.

Our results will indicate that rural areas with growing populations are located in the mega-urban areas of Seoul and Busan, highlighting the importance of links to major cities for rural growth. On the other hand, in rural areas where growth is occurring despite less urban influence, the factors of ruralism in terms of productivity, community, conservation, and creativity serve as driving forces. Thus, while planetary urbanization is a major trend, there are also ruralism drivers at the local level that go against the trend.

This study suggests that rural development strategies need to consider both rural exogenous conditions and the development and utilization of endogenous resources. As the Korean national territory is being reorganized based on the influence of the huge urban sphere, it is crucial to identify the unique dynamics of rural areas that are not subject to the tide of planetary urbanization.

Citations


Key Words: Planetary urbanization, Ruralism, Rural, Growth

EXPLORING THE PATH OF CROSS-BOUNDARY COLLABORATIVE DEVELOPMENT IN “TWIN CITY” AT COUNTY LEVEL: A CASE STUDY OF ZHEJIANG PROVINCE

Abstract ID: 684
Currently, with the continuous promotion of urbanization in China and the gradual formation of a high-speed rail network, resources such as population are accelerating towards central cities, posing huge challenges for the development of small and medium-sized counties. This has forced some county-level cities to enhance their competitiveness by developing through collaboration. Zhejiang province has a developed county-level economy and continuous urban development, where the phenomenon of integrated development of county-level cities is widespread. This article takes Zhejiang as an example to explore how to identify county-level economic entities with collaborative development potential and how they can improve their competitiveness by constructing “Twin City”, thereby promoting a more effective and balanced development of urbanization in China.

This article draws on the theoretical framework of "Twin City" and expands the theory of urban collaborative development to county-level economic entities. Through social network analysis (SNA), the changes in the urban network pattern before and after the formation of "Twin City" in small and medium-sized counties are evaluated, and the differences between the two are projected for the next 10 years to confirm the necessity of adopting a county-level collaborative development strategy. Finally, feasible strategic paths are provided for county-level collaborative development from the perspectives of functional collaboration, spatial collaboration, platform integration, and other aspects.

This research project includes three explorations:

(1) Identifying "Twin City" with conditions for cross-county collaborative development. These conditions are comprehensively judged from aspects such as spatial proximity, complementary advantages of resources, interdependent industrial chains, connected resource elements, and cultural identity, while considering special factors such as co-building high-speed railway stations or mutual recognition of talents.

(2) Exploring strategies for collaborative development of "Twin City". Four strategies are proposed from the perspectives of Physical Integration, Behavioral Integration, Organizational Integration, and Politico-administrative Integration, including functional collaboration to enhance urban level, spatial collaboration to reshape national territory, platform integration to seek policy support, and integrated management institutions and mechanisms.

(3) Restructuring the city network based on the revised gravity model of the high-speed railway after collaborative development of "Twin City". Based on the revised gravity model of the high-speed railway, the strength of economic connections between cities is calculated. Using social network analysis (SNA) based on the city economic connection matrix, the changes in the urban network pattern before and after the formation of "Twin City" are discovered: the formation of "Twin City" can significantly improve the urban level of small and medium-sized counties and move their position in the urban network closer to the center, and the change in the Effective Size also indicates a shift towards resource sharing and collaborative development in the region.

This article provides a new path for small and medium-sized counties and cities to achieve leapfrog development in the future, which has reference significance for China to promote urbanization construction with county towns as an important carrier. It also provides reference for China to accelerate the formulation of relevant policies for promoting county integration and regional adjustment.

Citations

A STUDY ON THE RESILIENCE FACTORS OF TRADITIONAL MARKETS IN SEOUL IN THE COVID-19 SITUATION

Abstract ID: 723

Individual Paper

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Recently, due to the spread of COVID-19, lockdown and restrictions had huge impact on our daily lives, and also on the local economy and commercial area. However, Seoul’s traditional markets, located in the center of the region, showed an unexpected recovery on sales during the COVID-19 situation. This is why the traditional markets in Korea should be considered widely.

This phenomenon cannot be simply understood by numbers, as it is influenced by the value, role, unique characteristics and forms of traditional markets. Therefore, the purpose of this study is to analyze the characteristics and functions of traditional markets and define the resilience of the COVID-19 situation.

The basic element of Korean traditional market which was called ‘Jangsi’, was from the street where people meet and communicate. The origin of the name ‘Jangsi’ means place and time. This Jangsi represents the mutual connection between space, time, and people.

Korean traditional market emerged during Goryeo(918), and spread widely during Joseon(1392). It was due to the rapid growth of population and agriculture for about 600 years.

Unlike the current traditional market, Merchants and Bobusangs(traders who sell things while carrying bots) visited village. Especially it was activated by common people not just buying and selling things, but also for a space to gather and celebrate religious events. This led to a market to role as a center of local community such as an important meeting and marriage events.

After the Korean War, the traditional market survived in the 1970~80s and continued to grow economically, despite the appearance of hypermarkets and SSM. Still traditional markets have not disappeared and continue to exist as an important center for villagers.

Therefore, understanding the history of traditional markets is essential to understand the sustainability and resilience of traditional markets.

Research methods are conducted through literature review, interviews, and data analysis. First from literature review, understanding the historical, social, cultural, and political flow of traditional markets must be preceded. Second by interviewing urban residents who visit traditional markets, important factors influencing market resilience should be identified. From following results, a complexity theory is used to analyze the resilience of traditional markets, and spatial analysis using public data will be conducted.

In conclusion, this study implies traditional markets are flexible for unexpected changes. It is meaningful for traditional markets to present the direction and pursue the connection of local communities in case of...
unexpected phenomenon such as COVID-19. And from this research, further qualitative studies can be expected including additional data.

Citations


Key Words: Traditional market, COVID-19, Sustainability, Resilience, Locational Characteristics

CAN REGIONAL COOPERATION REDUCE SPATIAL DISPARITIES? THE SPATIOTEMPORAL ANALYSIS ON COUNTIES IN ZHEJIANG, CHINA

Abstract ID: 755

Individual Paper

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Regional cooperation has been pursued as important planning strategies in China to promote the development of left-behind places and counter spatial disparities. This new regional approach of building inter-city cooperation regime is driven by the state-orchestrated process of regional governance and the bottom-up efforts seeking for supra-local development resources. However, scant literature has explored how regional cooperation in different spheres and forms affect development of backward places and regional disparities. The effects of inter-city cooperation might be spatially divergent. It could benefit the backward places through positive spillovers or exacerbate spatial disparities by further draining population and economic activities out of the left-behind areas.

This study has examined the regional cooperation in Zhejiang, China and how it affects county development and spatial disparities. Zhejiang Province is the pioneering zone of regional cooperation where the “Mountain-Sea” collaborative projects are boosted to reduce the gap between the backward and well-developed areas. Moreover, counties in China have been recently selected as the new state space for urbanization but their capacities and resources are often limited and spatially uneven. Therefore, we collected 36,352 pieces of cooperation news data from local government websites to measure the intensity and diversity of regional cooperation from 2010-2021. We employed the unsupervised machine learning method of Latent Dirichlet Allocation (LDA) for text mining and information clustering. We discovered 9 underlying themes of cooperation. There are 4 types of institutional cooperation, involving agreement, spatial planning, governance, exchange and visiting, and 5 types of functional cooperation, consisting of industrial development, educational service, transportation infrastructure, ecological tourism, and cultural activities.

Both the fixed effects model and the geographical and temporal weighted regression (GTWR) were conducted to reveal the spatiotemporal patterns of regional cooperation on county development and regional disparities. The results show that institutional cooperation of inter-jurisdictional agreement and spatial planning is more effective than functional cooperation to drive the development of backward counties. These regional institutions build legitimacy of cooperation and ensure the implementation of projects. The functional cooperation shows divergent
effects. The industrial cooperation stimulates local development in counties with strong industrial base and capacities but this is not the case for the backward counties. The transportation infrastructure cooperation also aggravates population and economic loss of the backward counties so greater spatial gap is found. The ecological tourism is more appropriate for these left-behind areas so that they can capitalize local natural resources. Public service also matters as cooperation on educational service shows consistent benefits on local population and economic growth, especially for the left-behind areas. Our paper contributes to the understanding of regional disparities with the perspective of inter-jurisdictional cooperation, and provides developmental implications of places that are lacking capacities.

Citations


Key Words: Regional Cooperation, Spatial Disparities, Spatiotemporal Pattern, Latent Dirichlet Allocation (LDA), Geographical and Temporal Weighted Regression (GTWR)

A FRAMEWORK FOR RACIAL EQUITY IN REGIONAL EXPLORATORY SCENARIOS

Abstract ID: 772
Individual Paper

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Planning under uncertainty and planning for racial equity both require an expansive imagination. In confronting the uncertain future, planners often opt for exploratory scenario planning – the practice of telling multiple unlike stories about the future in order to prepare for whatever might come. For equity planning, imagination supports vision beyond the oppressive and deeply unequal conditions of the present – a necessity when policy tinkering and muddling are insufficient for the necessary change. And yet, scenario planning and equity planning are oddly estranged. Though regional planners increasingly desire to incorporate racial equity into their practice, they lack guidance on how to incorporate it into scenarios. Likewise, equity planning may benefit from scenario planning’s deep analysis of driving forces and creative opening up of multiple futures. This paper seeks to close this gap in providing a framework for the incorporation of racial equity into scenario planning and demonstrating its applicability.

The framework builds upon Avin (2007), who insists on the intentional incorporation of community values into the scenario planning process. However, equity planning makes additional demands regarding the inclusion of marginalized communities in scenario planning, the deliberate defining of equity targets, and assessment of distributional impacts of proposed policies. To incorporate these, my framework looks first to the sparse literature on equity in scenario planning then to the broader literature on racial equity in regional planning. Using this framework, I assess the inclusion of equity in the Delaware Valley Regional Planning Commissions Dispatches from Alternative Futures scenarios plan. This plan successfully raises equity as a concern for the future of the Philadelphia region. However, this clear concern is hampered by the lack of clear policy directives for advancing equity in an uncertain future. This paper contributes a tool for planning practitioners and academics looking to incorporate equity into their regional scenario planning process as well as an analysis of a leading regional scenario
planning according that tool.

Citations


Key Words: Equity planning, Scenario planning, Regional planning, Uncertainty, Planning Frameworks

THE IMPACT OF AUTONOMOUS VEHICLES ON TRANSPORTATION SYSTEM PERFORMANCE IN TEXAS TRIANGLE

Abstract ID: 1032
Individual Paper

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With the advent of autonomous vehicles, a lot is set to change in the urban travel scenario. The more the movement of AVs increase in a city, the investigation will be needed to understand the changes in urban spatial structure, performance of transportation system, urban spatial structure, the design and functioning of built environment and urban lifestyle. This study compares between autonomous vehicles and traditional automobiles on road traffic. It explores the effects of AVs through the increase of capacity and the potential growth of vehicle trips on roadways. This study intends to investigate the travel impact of AVs in Texas Triangle through a GIS-based megaregion transportation model. It selects Texas Triangle, including Austin, Dallas, Houston, and San Antonio metropolitan areas, as an empirical case to demonstrate the procedure of analytical framework design, data inventory, model development, and model implementation. It presents scenario-based research with the assumptions about the potential change of transportation system by AVs. Given that many features of AVs in the future are still uncertain, this research pioneers as first estimates of impacts of AVs on megaregion transportation. It examines both passenger car and truck flows in the megaregion.

This research intends to incorporate the AVs to our GIS-based Megaregion Transportation Planning Model (MTPM) that was developed previously and further implement the MTPM to investigate the travel impacts of AVs. Few studies have focused on the development and implementation of megaregional transportation models. The challenge in building such kind of models is the need to ensure theoretical soundness and methodological validity in academic and professional studies along with meeting the expectation of public agency on the models for reliability, efficiency, and user friendliness. It extends the spatial scale megaregion level, which accommodates larger areas, more passenger and freight trips, and more complex transportation networks.

This study also estimates both personal access to employment opportunities and truck access to freight facilities in megaregion traffic analysis zone to facilitate transportation policy development in Texas Triangle. The results show how different penetration rate of AVs affect mobility, accessibility, and other performance indicators.
DEFINING SOCIAL SEGREGATION AND IDENTIFYING THE ROLE OF PUBLIC SPACES IN SOCIAL INTERACTION: A DATA-DRIVEN CASE STUDY IN LAREDO, TEXAS

Abstract ID: 1038
Individual Paper

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Segregation is a fundamental phenomenon and one of the defining features of modern cities worldwide. However, measuring and visualizing segregation in complex urban environments has been challenging. Public spaces where major social activities occur are critical in forming and maintaining social ties via face-to-face interactions. Social segregation occurs when individuals are only exposed to others like them, leading to decreased diversity, mutual respect, and social cohesion. Social exposure can provide individuals access to resources, support, and a sense of belonging, leading to promoting overall mental health and well-being.

This study first proposes a novel method that combines big data and social network analysis to identify social segregation based on people’s social exposure opportunities in public spaces in Laredo, Texas. Specifically, the network of people visiting public places outside their homes and workplaces defines their social exposure to others and, therefore, the levels of social segregation. Using this method/definition, this study aims to determine built environmental and socioeconomic factors affecting social exposure between people and which types of public spaces play a more critical role in connecting people of different characteristics. We utilized Social Network Analysis (SNA) and the SafeGraph mobility data to examine the centrality of public spaces and their roles in providing social interaction potential between different Census Block Groups (BGs).

The results revealed social segregation, defined as low levels of social exposure to others of different characteristics in terms of lacking copresence in public spaces within Laredo, with three distinct communities identified based on their social interaction potential. Factors such as density, ethnicity, house composition, commuting time to work, median income, poverty, unemployment, and education levels were the leading causes of social segregation in the city. Regarding public spaces, spectator sports, merchandise stores, nature parks and
RV parks, and restaurants were identified as the most visited land uses. Among these public spaces, nature parks and RV parks had the strongest potential to reduce social segregation in Laredo.

In conclusion, this study demonstrates the potential of using big data and social network analysis to analyze the levels and patterns of social segregation in urban environments. The results of this study suggest that socioeconomic status and cultural preferences play a more significant role in shaping social exposure patterns by impacting public space visit patterns than proximity to public spaces and urban density. Our findings provide insights into the role of public spaces, especially green spaces, in shaping social segregation patterns and offer guidance for future planning and policy efforts to promote intergroup social contact in diverse urban communities.

Citations


Key Words: Social segregation, Public spaces, Big data, Social network analysis

THE IMPACT OF REMOTE WORKING ON JOB-HOUSING REREALLOCATION IN THE BAY AREA-CENTRAL VALLEY REGION

Abstract ID: 1085
Individual Paper

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Work-from-home, a frequently used term in the past two years, is one of the forms of telecommuting. Prior to COVID-19, the share of telecommuters remained persistently low (3%) in the U.S. (2018 ACS). The spread of COVID-19 in early 2020 has led to an increase in remote working. Although many workers have returned back to the office, as of September 2022, 39% of U.S. adults still substitute some or all of their typical in-person work for telework. The changes in work and employment had an immediate impact on the economy and could lead to permanent shifts that last beyond the pandemic (Brynjolfsson et al., 2020). Working from home, by eliminating or reducing the need to commute to an office, could affect workers’ residential choices (Liu and Su, 2021), and anecdotal evidence of increases in housing demand in remote locations is consistent with workers moving away from job concentrations (Levin, 2020). Other studies also suggest that telecommuting could increase the decentralization of a city compared with the non-telecommuting baseline (Ory and Mokhtarian, 2006).

This study is one of the first to provide an early look at the impact of working-from-home during a time when the initial Covid shock has passed, but when work and residential location relationships are still in flux and likely adjusting. I evaluate the spatial configuration of work-from-home and jobs-housing reallocation during and after the pandemic, specifically, focus on the California San Francisco Bay Area and Central Valley megaregion, and seek to answer three key questions:

1. Where and in which industries did traffic volume change the most during and after COVID-19?
2. Did work-from-home reduce traffic at job centers? Has this been a more permanent shift?
3. Have telecommuters been more likely to move further away from job centers? If so, have they been more likely to supercommuting?

I use four datasets, StreetLight, LODES Workplace Area Characteristics (WAC), American Community Survey (ACS), and USPS Change of Address (COA), to build the best available database on this topic. The unit of analysis for this study is ZCTA (zip code tabulation area, equivalent to zip codes). I first use StreetLight traffic data to analyze trip volume change at the destination over time, from pre-COVID (2019) to post-COVID (2021). Then, I use their OD flow data to trace back and find the origin ZCTAs that accounted for the traffic flow changes. Using the above spatial results as a guide, I run a ZCTA-level regression to test whether destination ZCTAs with lower traffic recovery are associated with increasing remote working rates and higher net migration at origin ZCTAs, while controlling for a full set of residential and workplace characteristics.

The results show that destination ZCTAs with traffic recovery lower than 70%, compared to the pre-covid (2019) baseline, clustered in the south Bay area, Oakland and parts of San Francisco. Destination ZCTAs with traffic recovery more than 90%, clusters in the rural Central Valley (San Joaquin, Sacramento, El Dorado, etc.). Average work-from-home rate at the origin increased by 11%, from 30% in 2019 to 42% in 2021. Lower traffic recovery at the destination is associated with increasing remote working rates at the origin and a higher share of technical and professional jobs at the destination. Higher traffic recovery is associated with a higher share of service and entertainment jobs at the destination. However, when looking at the magnitude of the coefficient, workplace characteristics are more influential on traffic volume than worker demographics and remote working status.

Citations


Key Words: remote working, COVID-19, housing, socioeconomic inequality, regional disparity
environment, as well as its customer-oriented nature. Changes in weather patterns can deter potential tourists from participating in outdoor activities and can also lead to alterations in natural and social environments, reducing the appeal of tourism destinations. Consequently, the tourism industry is exposed to significant risks, including revenue loss and disruptions to its operations.

South Korea is no exception to this climate crisis and has already experienced severe consequences. In addition, the OECD Tourism Trend and Policies 2022 report indicates that tourism is a crucial driver of economic development in South Korea. In 2018, it contributed 4.7% to the nation’s gross domestic product (GDP) and is projected to support 1.4 million jobs, representing 5.3% of overall employment.

Climate-tourism related studies have been conducted in three main veins: 1) Assessment of the impact of climate change on single business fields, such as the hospitality and leisure industry; 2) Examining the influence of social norms on climate change-related behaviors of both tourists and businesses (Qiao & Gao, 2017); and 3) Predictive modeling of tourism flows under different climate change scenarios (Aygün Oğur & Baycan, 2023). Despite these efforts, insufficient attention has been paid to the effects of meteorological conditions on various aspects of tourist behavior, including their choice of travel destinations, participation in activities, tourism experiences, trip satisfaction and their implications for the tourism industry and sales expenditure.

Against the aforementioned context, this research seeks to address the following research questions: (1) To what extent does weather-related changes lead to negative impacts on tourists' expenditure patterns and, consequently, affect tourism-related sales revenue? (2) If such impacts are found to exist, do they vary across four different tourist destination categories (i.e., Spatially: urban and nature, Seasonally: summer, and winter) and at different times of the day? (3) Finally, to what extent do changes in tourism-related sales revenue have ripple effects on the state itself and neighboring states? The study was conducted in South Korea and covers the period from January 2018 to December 2019, utilizing retail transaction data provided by Lotte Credit Card, which accounts for approximately 9% of all credit card transactions in the country.

In this study, a total of 2148 prominent tourist destinations in South Korea were subjected to categorization using Natural Language Processing (NLP) techniques, utilizing data sourced from the Korea Tourism Organization. The categorization process encompassed the extraction of named entities from Wikipedia articles, while considering spatial and seasonal characteristics, such as urban or natural settings, and popularity during summer or winter (Yano & Kang, 2016). Subsequently, tourism-related businesses were identified based on their proximity to the categorized tourist destinations, and sales revenue data were extracted, taking into account the distance from the categorized tourist spots. Generalized Additive Model (GAM) is used to control the non-linear relationship between the sales revenue and climate indicators such as temperature, precipitation etc., while deciphering how it is affected by the weather indicators.

The findings of this study may inform tourism policymakers and businesses in South Korea and beyond on the impacts of weather-related changes on domestic tourism, and aid in the development of strategies for risk mitigation and climate adaptation.

Citations

RESEARCH ON THE IDENTIFICATION AND CONSERVATION PATH OF TRADITIONAL VILLAGE CLUSTERS BASED ON CLUSTER ANALYSIS: A CASE STUDY OF ZHANGZHOU CITY, CHINA

Abstract ID: 1213
Individual Paper

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Introduction: In 2023, the General Office of the Ministry of Finance and the General Office of the Ministry of Housing and Urban-Rural Development of China jointly issued criteria for application for their nationwide 2023 grant program to support demonstrations of concentrated and contiguous protection and utilization of traditional villages. They will select that qualify to carry out the preserve the villages. China has a many traditional villages with nearly 7,000 gaining national recognition. While they have significant differences in geographical, cultural, and economic conditions across regions,. They all face such difficulties as inadequate protection, lack of contextual models for their preservation, and the absence of adequate oversight organizations. These conditions often lead to intense competition and wasted resources among them.

Research question:
1. Can architects, planners and preservationists develop contextually sensitive standards for the use and protection of concentrated and contiguous areas of traditional villages?
2. How can decision-makers integrate the resources of traditional villages into the overall revitalization of the regions in which they exist, that is how can they move from the preserving individual villages to creating comprehensive approaches to drive the overall rural revitalization of an entire area.

Method: This paper reports findings from a two-stage research design. The first stage uses field investigations, historical literature analysis, and ArcGIS Pro spatial statistical analysis to identify and classify clusters of traditional villages according to four characteristics (spatial proximity, similar landforms, cultural convergence, and homogenous scenic landscapes) in Fujian Province. The second stage is an in-depth examination of these characteristics in 113 traditional villages in Fujian’s Zhangzhou City, Fujian Province. The aim is to identify contextual-sensitive protection strategies for the clusters.

Findings: The findings are as follows:

Traditional villages in Zhangzhou City fall into three types: comprehensive element clusters, characteristic clusters, and scattered clusters.
These clusters are further subdivided into 19 sub-clusters.
Based on these differences, the paper proposes a range of protection strategies that provide "overall control, strengthened correlation; strengthened characteristics, improved narrative; regional coordination, enhanced value." Implications for planning

These findings offer a method for identifying clusters of traditional villages that takes into account their histories and demonstrates cultural phenomena that cannot be explained at the individual village level to be reflected in the overall region. Climate is a very important indicator of village clusters. This provides a sound basis for the protection and utilization of clusters of traditional villages and aids in addressing the problems of inadequate protection, insufficient functionality, disorderly competition, and resource waste in individual villages, and reduce carbon emissions, thereby helping to achieve the “dual-carbon” goal in the context of current climate change.

Citations
INTTEGRATING TRANSPORT AND HOUSING TO MEET CLIMATE GOALS: COMPARING URBAN APPROACHES IN OREGON, USA AND SWEDEN

Abstract ID: 1233

Individual Paper

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Certain transportation and land use patterns are major contributors to greenhouse gas emissions in communities around the world. As these cities tackle climate change, they are also looking to address historic issues of affordability and equity. Different political and regulatory environments require different approaches, which presents the opportunity to compare and evaluate the effectiveness of each approach. Population growth without household growth is further exacerbating the issue in popular urban destinations, yet cities focused on providing additional housing can develop new land use patterns that align housing construction in accessible neighborhoods with access to transit and bicycling infrastructure. Collectively this growth requires new infrastructure to meet the demand. In both Sweden and Oregon, housing development is provided by the private sector although the cities and states establish land use regulations. In Sweden and Oregon, the higher level government has instituted policies that requires local governments to shift development patterns towards linking housing production and transportation access in a manner that reduces greenhouse gas emissions related to urban development. Both governments have sought to align housing production with transportation infrastructure in a way that promotes mixed user neighborhoods and mobility access via walking, biking and public transport. However their approaches are very different. Sweden offers national financing for infrastructure contingent on local production of housing to meet needs. This approach is outcome-based and relies on local governments to meet housing targets under existing planning documents. In contrast, Oregon has adopted rules to implement Climate Friendly and Equitable Communities that requires significant planning and spatial analysis to designate “Climate Friendly” areas while setting a target that 30 percent of current and future housing production (for cities over 10,000 in population) will occur in these areas. Both approaches adopt regulations and construct infrastructure that affects private development decisions, but the Swedish approach relies on incentives while the Oregon approach relies on regulations to guide production of housing in specific areas.

In this manuscript we will present comparative case studies of the contrasting approaches used in Sweden and Oregon, examine the political environments that led to these approaches, and describe progress to date in implementing Sverigeförhandligen and Climate Friendly and Equitable Communities. Our intent is to rely on policy analysis, document review, spatial analysis, and interviews to inform our research in an attempt to offer transferable lessons for other states, cities and countries seeking to address current housing production needs alongside transportation investments.

Citations
• Oregon Department of Conservation and Development. 2022. Climate Friendly and Equitable Communities - 6 page summary.
• Solly, A. (2020). Land use challenges, sustainability and the spatial planning balancing act: Insights from Sweden and Switzerland. European Planning Studies, 0(0), 1–17.

Key Words: regional planning, comparative governance, climate change, housing production

NET ZERO EXPRESSWAY: DESIGNING A SCENARIO USING THE GEODESIGN FRAMEWORK AND ARCGIS GEOPLANNER ONLINE
Abstract ID: 1246
Individual Paper

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The expansion of urban areas has created a need to connect both old and new neighborhoods to surrounding amenities and trail systems, while also improving community resilience. However, the current process used by urban planners and officials to plan cities can be time-consuming and data-driven, which may not always align with the desires of the residents. To bridge this gap, the Geodesign Framework developed by Steinitz (2012) offers a more collaborative and flexible approach that encourages input from stakeholders with diverse backgrounds and disciplines. By relying on existing knowledge and experience, the framework requires less data and offers more creative solutions. To test this approach, we conducted a study in Ames, Iowa, which aimed to identify the most suitable urban features for creating a carbon-neutral and connected city. We also evaluated the city's sustainable future using scenario planning concepts proposed by Avin (2007) and geospatial technologies like ArcGIS Pro, Geo Planner, and ArcGIS Online. Our findings revealed several areas of opportunity for improving transportation and green and energy infrastructure in Ames. Using the Geodesign Framework and these tools, we proposed innovative solutions for 2050 and represented them using line, point, and polygon features in Geo Planner. The study demonstrates the importance of a context-based, integrated street design for creating healthier cities in the future, as well as the efficiency and effectiveness of the Geodesign Framework in collaboratively building cities.

Citations


Key Words: net-zero & energy efficiency, Inclusivity, scenario planning, connectivity, complete street
THE INTERDEPENDENT RELATIONSHIP LAND USE AND TRANSPORTATION

Abstract ID: 1357
Individual Paper

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This research focuses on the development of a planning process that integrates land use and transportation planning with the goal of improving the access and mobility for all users of the transportation system. Several processes need to work together to develop an integrated approach. These are primarily the Comprehensive Planning Process, and the Long Range Transportation Planning process. Currently, these two processes are not integrated on a regional level. The long range transportation process addresses the capacity shortages on the transportation system by analyzing the impacts of a projected land use scenario using a 20 to 30 year horizon. The identified deficiencies caused by the 20-to-30-year growth are then primarily addressed by adding capacity to the existing infrastructure. However, the added capacity to the existing infrastructure results in an increase in demand which results in a need for additional capacity, and so forth.

This study examines the existing travel patterns from a 2019 Household Travel Survey and the community plans within Hillsborough County to identify and separate the trip making patterns on a community level and regional level with the goal to optimize the use of the network. The optimization is based on analyzing the existing infrastructure, the goals and objectives of the community plans, and the densities and connections between the land uses within the community, between the communities, and the county. The separation of the travel patterns between trips internal to the community, between the communities, and regionally, will allow for the identification of different types of infrastructure options associated with the different types of trips. These options are then applied to the future forecasts and networks to provide insight into the optimization and possible improvements to access and mobility in the County.

Citations

• Transportation in urban land change models: a systematic review and future directions R. Ahasan and B. Guneralp JOURNAL OF LAND USE SCIENCE 2022 Vol 17 Issue 1 Pages 351-367
• Exploring the Effect of Transportation Supply on Mixed Land-Use at the Parcel Level Y. Almansoub, M. Zhong, A Raza, M Safard, ADahou, and M. A. A. Al-qaness LAND 2022 Vol. 11 Issue 6
• Reorienting metropolitan land use and transportation policies in the USA F. Atash Land Use Policy 1996 Vol. 13 Issue 1 Pages 37-49
• An activity-related land use mix construct and its connection to pedestrian travel S. R. Gehrke and K.J. Clifton ENVIRONEMENT AND PLANNING B-URBAN ANALYTICS AND CITY SCIENCE 2019 Vol 46 Issue 1 Pages 9-26
• Transportation Concurrency, Mobility Fees, and Urban Sprawl in Florida T.G. Pelham Urban Lawyer 2010 Vo. 42 Issue Pages 105-114

Key Words: Regional Planning Process, Long Range Transportation Planning Process, Zoning, Comprehensive Plans
In the past, South Korea experienced national growth through a growth pole strategy in major cities, but in recent years, as population and employment have become increasingly concentrated in these cities, various urban problems such as overcrowding, congestion, and the decline of small and middle cities have emerged. In particular, as the population and employment in the Seoul metropolitan area have continued to grow, the issue of national imbalances and urban decline in non-capital regions has become more serious. To address these issues, a urban-region growth strategy has been gaining attention. This strategy has been implemented continuously, from regional planning in the first ‘Comprehensive National Territorial Development Plan’ to the ‘5+2 Economic Zone’ and most recently, the "Megaregion plan” in conjunction with amendments to the ‘National land planning and utilization act’ and the ‘Special act on balanced national development’. Such policies and plans at the urban-region level aim to enhance the competitiveness of cities and regions by establishing mutually complementary relationships based on functional interaction and cooperation between cities. This means that a urban-region approach, in addition to individual city-level urban planning, is necessary. The urban-region level approach has been considered in various previous studies. A urban-region is generally defined as "an urban area consisting of a central city and its surrounding hinterland that are socially and economically interdependent" . In Korea, the need for urban-region development policies, has been suggested for enhance the competitiveness of small and medium-sized cities . Moreover, it has been shown that the characteristics of the urban-region, along with the inherent characteristics of individual cities, affect the growth and decline of individual cities, and urban-region planning can be an important factor for enhancing the competitiveness of non-metropolitan cities and promoting national balanced development. This urban-region is related to the "Network city theory," which claims that a city can form an integrated economy and enhance urban competitiveness by borrowing the size of other cities through the formation of a network among cities. Based on Network city theory, many studies have identified interactions as a major factor in urban growth. These results suggest that the urban-region approach needs to be considered as part of the national balanced development strategy. In this context, urban-region are attracting attention in various plans and policies as a strategy for urban growth. However, there is no agreed-upon method for setting urban-region areas, and despite the fact that various studies have been conducted to identify and establish urban-region areas, most of these studies have set urban-region areas based on subjective methodologies. In addition, setting urban-region areas based on commuting data, which only considers the movement of urban residents, has limitations in comprehensively considering interdependent urban areas, such as living and economic areas. Moreover, existing urban-region plans have been established based on metropolitan administrative units, and while recently developed megaregion plans can be conducted beyond the boundaries of metropolitan administrative units, in reality, megaregion plans are still based on the metropolitan administrative boundary. Against this backdrop, the purpose of this study is to establish urban areas that are not limited to metropolitan administrative units, but consider the combined livelihood and economic rights of urban residents, and to provide implications for the mega-region policy being promoted by the current government to strengthen the competitiveness of non-metropolitan areas.

Citations


Key Words: Urban region, Regional plan, Functional interaction, Network city

ANALYSIS OF POPULATION DECLINE TYPES AND URBAN NETWORK CHARACTERISTICS BY TYPE IN THE ERA OF LOW BIRTH RATE AND AGING: FOCUSING ON SOUTH KOREA

Abstract ID: 122

The trend of population decline due to low birth rate and aging is not only happening in Korea but also in many major cities in advanced countries, and it is a worldwide issue that is being addressed. Seoul, the capital of Korea, has been showing a decreasing population trend since 2010, starting from a resident population of 10,312,545, and some other metropolitan areas are also experiencing similar population decline. This population decline phenomenon is affecting regional relationships, exacerbating regional imbalances in population, not only in large cities but also in small and medium-sized cities.

The causes of population decline can be broadly categorized into natural and social factors, and these can be further classified into population decline due to low birth rate and population decline due to population movement. The recent population decline phenomenon that is being observed worldwide is inevitable because it originates from low birth rates. Moreover, population decline accompanied by the outflow of the youth population and aging is a serious problem that reduces urban productivity and accelerates the pace of decline. Thus, population decline is directly related to changes in the population structure, and conversely, changes in the population structure are important factors that determine the speed and direction of population decline.

The purpose of this study is to classify the patterns of population decline caused by low birth rate and aging through cluster analysis and to shed light on the regional characteristics of each population decline type based on urban networks. We used birth rates and population movement, which are natural and social factors, respectively, as indicators for classification, and identified the characteristics of each type based on the characteristics of urban networks and the factors that influence population decline extracted from previous literature. The results of this study are expected to indicate the need for regionally tailored policies that match the type of population decline, rather than separate policies for promoting childbirth and attracting population, which is the current situation.

Citations

The balanced spatial structure system increases accessibility to central place that provide various services and improves citizens’ convenience and inclusiveness by resolving regional inequality. Recently, Busan City presented the 10CORE, a new urban spatial structure system, in terms of spatial democracy that guarantees an equal quality of life for all in the 2040 Busan City Master Plan. In addition, it is pursuing a ‘15-minute living city’ so that various city functions can be enjoyed within 15 minutes by foot or bicycle from the residential area.

Accordingly, this study aims to identify the existing Busan central place system and evaluate its equity so that Busan citizens can access the equitable central service. Furthermore, by deriving underprivileged areas, it is intended to provide policy implications for future spatial structure planning in Busan.

First, in order to identify the central place, the centrality index was calculated in grid units using four indicators representing the center characteristics. Through Hotspot Analysis, the central place where a high centrality index forms a cluster was identified, and delimiting central area through DBSCAN, machine learning cluster techniques. According to the formula of the center system based on the transportation principle in W.Christaller’s central place theory, we can calculate 12 appropriate centers when considering 16 districts in Busan as complementary areas. Accordingly, DBSCAN results representing 12 clusters were selected as the final center. The identified central place are Seomyeon, Dongnae, Sajik, Pusan National University, Yeonsan, Jungang, Busan Station, Daeyeon, Haeundae, Jangsan, Sasang, and Deokcheon.

Interaction indices were used to confirm whether the identified centers had a balanced distribution. Based on the traffic volume between centers, the result of Entropy Index(EI) appeared close to 0 at the level of 0.309, showed an imbalance network between central places. Therefore, we estimated Directional Dominance Index(DII) and it confirmed that central places had a distinct hierarchy. As a result, Seomyeon and Dongnae had a dominance of 2.6 and 1.7 times the overall average, while Deokcheon and Sasang had a remarkably low dominance of 0.3 times. It implies that Busan has an unequal spatial structure system in which hierarchical centers are spatially unevenly distributed.

In order to recognize underprivileged areas according to the unequal central spatial structure, the influence area of central place was derived using Network Analysis. Each influence area adopted the concept of a ‘15-minute living city’ and was designated as a radius of 1 km, equivalent to a 15-minute walk from the central place. As a result, most of the traditional decrepit residential areas in Busan were underprivileged area. Also most of the Eastern and Western Busan, were found to be disadvantaged areas that are not included in the influence area. This suggests that the current central place system does not cover enough residential area.

This study differs from previous studies in that it uses a machine learning technique called DBSCAN in identifying the center. In addition, since the 10 Cores planned by the city have a large gap in hierarchy, it suggests that it is necessary to consider how to narrow the gap between the existing central places. It can help to provide equal central area services for citizens. Furthermore, newly added central places such as Gijang, Gangseo, Hadan, and Gadeok can be helpful for balanced development in Busan, but old residential areas in the central region were also needed to be considered in the new central area system in 2040 Busan Master Plan. This study can provide great significance in that it can present the right direction for the equitable spatial structure to the city planning policymakers of Busan.
COMPACT CITY PLANNING FACTORS INFLUENCING URBAN SELF-SUFFICIENCY

Abstract ID: 363

Poster

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With the popularization of automobiles and the development of science and technology, cities have spread outward since the 20th century. As a result, environmental destruction has occurred, and problems such as abnormal weather have recently begun to occur around the world. There were serious discussions about the problems that arose from the destruction of the environment and the spread of the city, and the idea of a compact city emerged in many countries. A compact city is a concept of urban planning that suppresses the spread of cities for sustainable development and brings daily urban functions such as housing, work, and commerce into established cities as much as possible to induce relatively high residential density and mixed use of land.

Along with the compact city, interest in self-sufficiency is also increasing. Recently, like the 15-minute city of Paris, Seoul created a similar concept through the 2040 Seoul plan. Urban planning, which places all amenities close to the residence, means that interest in the self-sufficiency of small spaces has increased. There is a difference in the background of self-sufficiency and compact cities. But there's something in common in that it aggregates the functions of the city in a certain space. In addition, given the recent trend, self-sufficiency and compact cities are deeply related, but there are still few studies analyzing the relationship between the two.

Against this background, this study attempted to establish the factors affecting the compact city to see the relationship between the factors of the compact city and the self-sufficiency of the neighborhood living area. Therefore, significant indicators related to compact cities revealed through various previous studies were set as independent variables, and multiple regression analysis was conducted using the self-sufficiency index of each neighborhood living area unit as a dependent variable.

As a result, it was concluded that mixed land use, land use, and interaction with the center had a positive effect on the city’s self-sufficiency. It was concluded that the construction of a bedtown-centered residential area and the high connectivity of the road create long-distance traffic, reducing self-sufficiency. Accordingly, we can feel the know to actively distribute urban functions and mix land use to the extent that it does not weaken urban functions, and the need for compact urban planning to increase self-sufficiency rather than simple compression.

Citations
• Simon Elias Bibri, John Krogstie and Mattias Karrholm. “Compact city planning and development: Emerging practices and strategies for achieving the goals of sustainability”. Developments in the Built Environment Volume 4, November 2020, 100021

Key Words: Compact City, Self-sufficiency, Urban Planning Factor

ANALYSIS OF THE RELATIONSHIPS BETWEEN ONLINE CITY NETWORK AND URBAN GROWTH: EMPIRICAL EVIDENCE FROM KOREAN MEGAREGIONS
Abstract ID: 455
Poster

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The theory of the network city posits that a city is not merely a physical location, but rather a complex network of relationships. As such, a city's location and connectivity on the network are crucial for its growth, and sustainable growth is achieved through the exchange of innovations and developments across fields such as transportation, communication, and information among cities. The concept of network cities is closely tied to the advancement of informatization, whereby cyber spaces - particularly online - have become integral to urban dwellers' daily lives, transcending the constraints of time and distance to interact with a variety of urban systems and promote inter-city networks. Recent studies have acknowledged the usefulness of analyzing toponym co-occurrences in online data as a method for comprehending the structure of inter-city networks. However, these analyses have been limited to demonstrate the form and structure of urban networks and there is still a lack of understanding regarding the relationships between online city networks and urban growth, including how they may be correlated or causally related. Therefore, the aim of the study is to identify the functional relationships between Korean cities and to empirically analyze the relationships between interdependence within Korean megaregions and urban growth. Methodologically, an OD matrix in cyber space was constructed using the online toponym co-occurrences. Afterwards, a comparison was made between the predicted interaction estimated through the gravity model, which was based on population size and distance, and the actual volume derived from co-occurring toponyms. Finally, multiple linear regression analysis was conducted including interdependence variables within megaregions, small and medium-sized city(SMC) dummy variable, interaction variables and control variables that affect urban growth. The results of multiple linear regression analysis, using the relative flow rate derived from gravity model as the main network variable within the region, showed that the interdependence coefficient within the region was positive. This suggests that cities could experience population growth, economic growth, and employment growth not only due to agglomeration externalities but also due to interdependence within megaregions. However, in the population growth model, it was found that the coefficient of the interdependence variable was negative for SMCs in non-capital areas, indicating a negative external effect, also known as the shadow effect. On the other hand, the interdependence diversity index showed a significant positive value, highlighting the necessity of establishing linkage cooperation with a variety of cities rather than just a few specific cities. The results of study demonstrate that strengthening online functional connections with other cities in megaregions is necessary to secure regional competitiveness and economic self-reliance. This finding aligns with the current trend in Korean regional development policies centered on megaregions. Furthermore, this implies the importance of online networks in urban growth policies in addition to existing networks based on commuter and freight movement. Still, SMCs in non-capital areas have a negative effect on population growth, so a distributed network structure can have a positive effect rather than a network concentrated in the central city within the region. Thus, there is a need to promote a horizontal network strategy at the megaregional level when establishing regional planning policies for
them. A network between cities based on co-occurrence has a unique character compared to existing networks based on physical infrastructure because toponyms representing cities are accompanied by contextual information, unlike freight movement and commute data. Therefore, in order to understand the nature of this network, it is crucial to analyze the content of the co-occurring texts between cities. In future studies, it is essential to collect original texts using text mining techniques and to consider the context in which city pairs are mentioned.

Citations


Key Words: City Network, Urban Growth, Megaregion, Toponym Co-occurrence, Regional Planning

ANALYSIS OF THE FACTORS OF POPULATION MOVEMENT BETWEEN REGIONS: FOCUSING ON THE CHARACTERISTICS OF MOVE-IN AND MOVE-OUT AREAS

Abstract ID: 702
Poster

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Purpose and Research Question: The purpose of this study is to identify factors that affect population movement among the characteristics of “move-in” and “move-out” areas. Certain areas seem to have a steady population influx while other areas seem to demonstrate a steady outflow. In declining regions, population outflow occurs because of weakening regional competitiveness, which can in turn cause the outflow of population. It appears that population outflow in Korea is strengthening again. In addition, Korea is experiencing an unprecedentedly low birth rate, which means a natural increase in the population is less likely. Accordingly, the population of a specific region is determined by the population entering and leaving, which demonstrates different aspects depending on the features of the region. Against this background, this study explores what regional conditions result in an influx of population and how to prevent outflow. Although factors such as individual and household characteristics can affect population movement, this study attempts to explain population movement through regional characteristics.

Data and Methods: The data used in this study are the domestic population movement statistics for 2020, from which the following information is utilized: individual resident registration and re-registration reports; information on resident registration population; population fluctuation factors (transfer, birth, death), and transfer date, transfer number, and resident registration number. Data related to dual households were used, together with moving-in date, the reason for moving in (job, family, housing, education, residential environment, natural environment), the age and gender of the householder, whether it is a single household, and the total moving population (male, female, total). The purpose of this study is to confirm the movement of the population due to the characteristics of the outflow and inflow areas. The total number of people who moved from the outflow area to the inflow area with the minimum space unit was used as a dependent variable. Accordingly, the unit of analysis in this study is two administrative districts in two cities, counties, and districts. In this study, since each sample belongs to two higher levels: the inflow area and the outflow area, the analysis was performed using a cross-
classified multilevel model.

Findings: As a result of the analysis, it was found that regional characteristics had different effects on population movement in move-in and move-out areas. The gross regional domestic product (GRDP), financial independence, and commuting ratio in the residential area affect population inflow to the move-in area, while the number of single-person households, employment, youth employment, cultural infrastructure, green space, and social welfare facilities affect population outflow of the move-out area. In addition, it was found that the total fertility rate, the ratio of empty houses, and the ratio of old houses were not significant. These results mean that among the various characteristics of the region, different factors cause population inflow and outflow. This suggests that at a time when natural population growth is affected by low fertility rates, separate policies to increase the local population are required that increase population inflow and reducing population outflow based of the different identified relevant factors. The limitation of this study is that individual and household characteristics were not considered due to the limitations of the data; however, this study confirmed the total population that moved between cities through regional characteristics of both move-in and move-out areas.

Citations


Key Words: Population movement, Move-in areas, Move-out areas, Regional characteristics, Multilevel model

THE EFFECT OF COMPACT SPATIAL CHARACTERISTICS ON CARBON DIOXIDE EMISSIONS IN THE AGE OF POPULATION DECLINE

Abstract ID: 724

Poster

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This study attempted to confirm whether compact cities, which emerge as solutions from the perspective of urban planning in the era of population decline and climate crises, can be the key to solving problems. To do this, an empirical analysis was conducted to determine whether a compact spatial structure affects carbon dioxide emissions and, if so, whether the effect varies depending on the characteristics of the region’s population. To analyze the effect of spatial structure on carbon dioxide emissions based on the I=PAT and STIRPAT models, which show that population, income, and technology affect the environment, the I=PACE model was used with the expanded concept that total population, per capita GRDP, space compactness, and energy intensity will affect carbon dioxide emissions. In addition, the study considered the compact spatial structure and compact cities, emphasizing the importance of social connectedness and functional connectivity in today’s compact cities and clarifying the operational definition of compact spatial structure. Evaluation indicators were selected through a review of previous studies to measure the compactness of the space, and connectedness compactness indexes using the space syntax were added to include functional connectivity. Finally, 20 detailed indexes of six
characteristics (population, land use, service accessibility, transportation accessibility, connectivity, and concentration) were used, normalized using the min-max method, and the average value was suggested in the form of a spatial compactness index. Furthermore, to calculate carbon dioxide emissions in counties, carbon dioxide emissions in six sectors (road transport, housing, commerce, public, waste, and absorption) were calculated by multiplying the activity data, emission factors of combustion by fuel, and adjustment factors. A panel analysis, which simultaneously performs time series and cross-section analyses at the same time, was used as the analysis method, and it was found that space compactness (-), population (+), affluence (+), and energy (+) variables had a significant effect on carbon dioxide emissions. Additionally, compacting the spatial structure in population-decline areas was found to be effective in reducing carbon dioxide emissions, in general, areas with a low risk of population decline showed a more positive effect on population, affluence, and energy intensity factors. The results of the study are significant in that they investigate the relationship between compact cities and carbon emissions by reflecting on today’s urban areas and national issues.

Citations


Key Words: Green House Gas Reduction, Urban Spatial Structure, Compact city, Carbon Neutral
PRESERVATION IN THEORY AND PRACTICE: LOCAL PLANNING FOR HERITAGE AT RISK
Pre-Organized Session 60 - Summary
Session Includes 608, 609, 610

Globally and locally, planners have been authorized to theorize and practice heritage preservation for more than half a century. US states enabled local governments to regulate and prescribe what happens to built environments beginning in the 1960s. At the same time, decolonizing cities and countries decided their architectural and cultural identity revolved around which architecture they planned to keep, restore, and replace. Yet historic preservation remains marginal to planning research on the profession’s reinvention as more politically progressive, community oriented, culturally competent and environmentally conscious since the 1960s. This session fleshes out heritage preservation’s place in planning’s history and future through case studies spanning large cities and small towns of North and South America where planners dis/empowered themselves and others to preserve diverse heritage.

Objectives:

- To see historic and heritage preservation as a planning tool—a set of spatial operations that can slow or spur un/desirable changes to the built environment
- To recognize implicit biases in planning practice and theory and their impact on marginalized people and places
- To learn ethics of equitable preservation planning, impediments to their uptake, and impacts of their incorporation into the planning profession

ETHICS IN LOCAL PRESERVATION PLANNING AND THE NEED FOR IMPLICIT BIAS TRAINING: A CASE STUDY OF HUNG SA DANH IN THE CITY OF LOS ANGELES
Abstract ID: 608
Abstract within Pre-Organized Session 60

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This paper examines the need for implicit bias training needed for local historic preservation commissions as studied with the municipal landmark nomination process for Hung Sa Danh, a Korean American historic site, and the City of Los Angeles Cultural Heritage Commission. The case study called for the need of translation services and other culturally-relevant services during the nomination process and for implicit bias training of cultural heritage commissioners given the bias held against Korean American and Asian American community advocates for Hung Sa Danh. While the Los Angeles Office of Historic Resources has completed a context study on Korean Americans in Los Angeles, little information has been adequately utilized by Planning Department staff as they approved the
identified site as historically significant but approved of its demolition. This case study examines the processes in which community members were adherent and subject to preservation standards and practices, whereas city officials were not.

Citations


Key Words: Asian American, public history, historic preservation, heritage management, Korean American

“WE WERE FORCED TO LEAVE OUR TOWN, BUT OUR TOWN NEVER LEFT US”: USING ARTS-BASED METHODS AND RADICAL SOCIAL CARTOGRAPHY AS REPARATION IN PRESERVATION PLANNING IN CHILE

Abstract ID: 609
Abstract within Pre-Organized Session 60

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This paper reflects on how arts-based methodologies and radical social cartographies, as situated methods, can build toward the critical project of reparative planning and preservation (Williams, 2019). In collaboration with women in the deindustrialized coal basin in southern Chile, I examine how we have deployed the arpillera urbana craft as a cartographic method that challenges the limitations of more conventional participatory mapping bringing about coproduced validated knowledge, collective healing, and local change. The arpillera urbana, is a radical feminist practice of storytelling and protest, emerged in Chile during the Pinochet dictatorship (1973-1990) when women used it to denounce their relatives’ disappearances and political violence. Today, women living with marginalization histories continue to create narratives in textiles depicting poverty, gender violence, and their survival strategies. The arpilleras have colorful stitching, applique, and embroidery; they are created in group sessions where women share experiences, talking as they sew.

Since 2009, the state has officially recognized several former industrial sites in southern Chile as national heritage. However, these cultural recognitions focus on the industry’s contribution to Chile’s capitalist development and male occupations in the mine and do not translate into the actual preservation of industrial heritage. Despite the important historical role of women in these localities, sustaining social reproduction in their communities and having critical roles in social movements and resistances, their histories and memories are absent in official heritage narratives, designations, and preservation plans. Through my long-standing collaboration with these communities, we have created a participatory mapping methodology using the local arpillera urbana technique to revindicate their towns’ history and collective memory from a female lens.

These arpilleras as “radical memory cartographies” of multiple spaces-times-bodies, allow participants to articulate multiple experiences, relationships, practices, and places through their own voices and interactions. Feminist methodologies in planning have become increasingly useful as a response to conventional methodologies’ limits to capture the experiences of women and others who have been marginalized from planning processes (Sweet & Ortiz-Escalante, 2014). With its focus on experiential knowledge, feminist thought directs attention to and recognizes a broad range of knowledges and knowers that exist beyond the experts and authorities, its traditional scientific methods, and the dominant patriarchal culture. It allows to include what Watson (2006) defines as ‘deep difference,’ encouraging planning scholars and practitioners to seek alternatives to dominant methodologies for understanding urban issues and implementing change (Speak, 2020). On the other hand, radical social
cartographies bring a wider diversity of purposes and techniques, moving beyond the view of participatory mapping as a tool to merely contest the state and experts’ understanding of place (Sletto, 2021). Marginalized communities appropriate mapping tools and bring their own epistemologies to strengthen self-determination, local governance, and material transformation of their environments. Finally, situated arts-based methods enable the coproduction of knowledge in an accessible format for participants, residents, and authorities, allowing other rationalities and sensibilities to emerge in understanding the historical and present value of places among different actors. The paper contributes in three ways to advance reparative planning and preservation practices and theories: 1) It helps to identify the silences in urban history that are perpetuated through planning and preservation processes in order to address them and repair 2) Illuminates how situated and arts-based approaches can create safe spaces to collectively heal and produce sustainable spatial imaginaries and advocacy tools like the arpillera, that may inform planning processes 3) Illustrates how a reparative approach in planning and preservation goes beyond recognition and economic reparation, working to restore affective, epistemic and moral structures that have allowed the white, male, and expert privilege to remain unchecked for so long in our fields (Williams, 2019).

Citations


Key Words: historic preservation, reparative planning, participatory mapping, feminist planning, arts based methods

‘AREAS OF CRITICAL PLANNING CONCERN’: COASTAL CITY AND COUNTY-LEVEL PLANNING FOR BLACK HERITAGE PRESERVATION ON MARTHA’S VINEYARD

Abstract ID: 610
Abstract within Pre-Organized Session 60

AIDOO, Fallon [Tulane University] faidoo@tulane.edu, presenting author

Some of the smallest towns and cities boast the largest set of historic, cultural and natural resources protected from speculative development and unchecked growth. Many of the localities, be they centuries- or decades-old, work with their county governments to plan neighborhood and environmental conservation—using planning instruments that cede local control to metropolitan planning organizations (Minner 2016). Some rely on state-chartered councils of local government to provide technical assistance as they select areas and sites worthy of preservation or development; others, even those low in capacity and capital, defend their power to decide which buildings and landscapes to recognize as “significant,” “historic” or “at risk” and to determine appropriate protections (Roberts 2020a and 2020b). The ensuing mixture of statutory acts and discretionary actions by city and regional planners—sometimes fraught, sometimes friendly—are examined in this paper for they shed light on why preservation planning for Black heritage hasn’t materialized in small cities even when they support it financially, intellectually and/or politically.

Less than 2% of tangible and intangible heritage recorded in the National Register of Historic Places recognizes
Black history and culture (Roberts 2020b). Yet, unrecognized sites and structures of significance to Black communities and culture figure prominently in local development plans, especially extractive heritage tourism and commodifying commercial reinvestment (Saito 2009; Baldwin 2016; Summers 2019). Stops along the African American Heritage Trail of Martha’s Vineyard (AAHTMV) fit this description and ground this content analysis of city, county, church, and family records shedding light on diverse participants in the curation of Critical Areas of Planning Concern (CAPC) across the island since the 1970s.

CAPC, the brainchild of Martha’s Vineyard Commissioners struggling with evaluation, selection and rejection of real estate preservation and development plans, represents—at first glance—a typical growth management regime. Its power revolves around mundane administrative procedures indifferent to architectural and cultural difference: permitting, plan review, and property assessment within statutory boundaries. This instructive case study highlights how local preservation planners use zoning regimes (ordinances and rubrics) to disrupt county planning indebted to colonial land claims and color-blindness. Through Design, Development and Demolition reviews for Zoning Overlays, local planners commission architectural surveys, conduct historical studies, and contact community stewards that reorient CAPC assessments of survivability towards what they consider sustainable Black heritage.

In recent years, local planners’ documentation of Black-owned and tended buildings has rendered overlooked homesteads visible and viable—showing why the county must treat them as historically significant and architecturally intact even if local historical commissions don’t. As in earlier years, however, local planning reports and reviews predominantly present architecture of the Black experience as too multifaceted for the banality of city-county preservation planning to save. Their perfunctory theory of regional planning discounts their own progressive praxis of city planning, I argue. The paper concludes by indicating further study of preservation planning by small cities and their surrounding counties will flesh out where and why both fall short in protecting nationally recognized African American heritage from the very threats they identify and project (Ryberg-Webster 2017; Velez, A. L. K., Daniel, J., & Hoxha, S. 2022)

Citations


Key Words: preservation planning, Black heritage, zoning overlays, regional planning, small cities

PLANNING AGAINST UNJUST LAWS 1
Pre-Organized Session 69 - Summary
Session Includes 1090, 1091, 1092, 1093

Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric has the
potential to incite violence against marginalized groups. Such legislative proposals are rife across many states of the US. What can planning do in the face of unjust laws? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Sandercock 1998; Beard 2003; Miraftab 2009; Jacobs 2019). But where, how, and what is radical planning in the current moment? This session focuses on unjust laws and asks: What can and should planners, across our subfields, do?

Objectives:

- To understand better how planning, as a field of scholarship and practice, is facing and challenging a new legal and policy terrain of unjust, oppressive laws, and changing our thinking and doing in various ways.

PLANNING AS CRITICAL RACE PRAXIS
Abstract ID: 1090
Abstract within Pre-Organized Session 69

BRAND, Anna Livia [University of California Berkeley] annalivia@berkeley.edu, presenting author

Planning academics gather in Miami, Florida, amid an array of legislation targeting the most vulnerable among us. Proposed and actual legislation banning abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation is coupled with rhetorical onslaughts that seek to solidify the ongoing workings on white supremacy. What can planning do in the face of unjust laws? How shall planners respond to these continued waves of harm? While planning is generally considered to be institutionally driven, our discipline is framed by normative ideas about what ought to be for society and state and commitments to social justice. What happens when such normative ideas are constrained and community members are actively in harm’s way? Where is radical planning in the current moment?

This research-in-motion presentation engages this critical moment by asking how, within current conservative legislation and rhetoric, might we radically reimagine urban planning scholarship and practice as intentionally confronting the continued workings of white supremacy. As Goetz et al. (2020) and Williams (2020) argue, far more work is to be done to articulate planning’s ongoing whiteness and to theorize ways that our discipline can be anti-racist. Drawing on nascent work that examines the ways that whiteness and white supremacy work through our discipline (Goetz et al., 2020; Williams, 2020; Bates et al., 2018), I argue for planning to grapple with the full array of the ways that planning is complicit in harm and how we might conceive of our empirical and pedagogical work through a reparative praxis. This research engages critical race studies as a praxis for planning and, drawing on ongoing research in three racialized neighborhoods in New Orleans (Tremé, the Lower Ninth Ward and Lakeview) and through a critical race lens (Crenshaw, 2010), examines the ways that anti-Blackness works across time and space.

My work for this research-in-motion session highlights both grounded and relational ways that race takes place while also keeping track of urban planning’s complicity in spatially grounded racial processes. At the same time, my analyses of urban planning and racialized development in these three neighborhoods considers planning as a discipline that might actively work against racialized development modalities and as one that can take part in dismantling the varying ways that white supremacy and whiteness work geographically (Bonds & Inwood, 2016). Thus, I draw from grounded research to articulate how planning might respond to legislation and rhetoric that incite continued violence against certain bodies and places. This paper is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this
unsettling moment for planning and for the world.

Citations


Key Words: radical planning, racialized development, spatial justice, urban design, spatial planning

PLANNING AND THE NEW GEOGRAPHIES OF DEAD FUTURES

Abstract ID: 1091
Abstract within Pre-Organized Session 69

BOU AKAR, Hiba [Columbia University] hb2541@columbia.edu, presenting author

Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric has the potential to incite violence against marginalized groups. Such legislative proposals are rife across many states of the US.

What can planning do in the face of unjust laws? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Miraftab 2009). But where, how, and what is radical planning in the current moment?

In this research-in-motion presentation, I develop the concept of what I call the new geographies of dead futures. If the imagined, planned future was halted or remained unfinished due to unanticipated events, what I call a “dead future,” what other futures emerge instead in these geographies? What is the role of planning? This framework explores the ways the geographies of the imagined futures of the past have been reconfigured through temporalities and spatialities of displacement, refugeeess, occupation, and humanitarian aid. I think about planning as it plays out in Beirut’s peripheries, in informalized sites that have been co-inhabited by poor Lebanese families and Syrian refugees. These reconfigured dead futures open up the possibilities for new modes of urban habitation and existence to emerge—especially for those who would not otherwise have access to shelter, in the context of state abandonment for the urban poor. It also reflects on the politics of urban politics and its hopes and despair (Berlant, 2011, Warren, 2015).

This paper is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and for the world.
Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed banning abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric can potentially incite violence against marginalized groups. Such legislative proposals are rife across many states of the US. They find numerous echoes across the globe as once-imagined democratic futures increasingly resemble farfetched fantasies.

What can planning do in the face of unjust laws or profoundly inequitable institutions? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Miraftab 2009). But where, how, and what is radical planning in the current moment?

This research by practice follows the unfolding of a project that ambitions to recover the partially expropriated path of a highway project into an inclusive urban space (a park) in Beirut (Lebanon), a city ravaged by three years of unfolding political and economic crises. The project tests the possibilities of a radical planning project that imagines a collaborative form of city-making where several academic, professional, public, and non-profit actors are mobilized to act together as co-designers and custodians of the planning process. In reflecting specifically on the role of one academic research center (the Beirut Urban Lab) in the making of radical planning, the research plays close attention to the role that transparent and accessible data and information play in building trust, incentivizing collaborations, developing shared narratives, and disrupting the deliberate erasures of public records that facilitate privatization in Beirut and other cities (Fawaz 2023). The project intersects with a broader reflection on the possibilities ushered by principles of commoning to guide toward more inclusive planning processes (Lipietz and Bhan 2022). It is also engaged in improvising planning within the contours of a southern turn that approaches the practice as locally rooted, disruptive of inequitable power relations, and attuned to the urgency of progressive action (Watson 2016, Yiftachel and Mammon 2022).

This paper is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and the world.

Citations

A PATH TOWARDS REPARATIVE PLANNING: TRANSFORMING THE HARM OF PRIVATE PROPERTY

Abstract ID: 1093
Abstract within Pre-Organized Session 69

WHITE, Mia [The New School] miawhite@newschool.edu, presenting author

Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies, and queer and trans representation. What can planning do in the face of unjust laws, particularly given the ways in which these unjust laws have originated the very existence of planning? Could we ever conceive of a substantive reparative planning model that not only rejects attacks on critical race studies, but also relies on these frameworks to transform that most fundamental of planning’s building blocks: private property?

This research-in-motion (RiM) presentation will introduce an in-development first book project that examines how community planners seek to transform the harms of private property through the use of a shared property approach called the community land trust. These experimental attempts to transform harm can be understood as the labor of reparative planning, and they demonstrate important confrontations with private property, the ongoing colonial state, and the racial property regime which shapes eviction, dispossession, displacement, and gentrification. This presentation builds on previous work (Dories, 2022; Franke, 2019; Song, 2021; Taiwo, 2022; White, 2021; White, 2022; Williams, 2020), locating the development of reparative planning as an extension of a critical planning tradition that thinks beyond normative ideas, towards visions for radical planning (Sandercock 1998; Beard 2003; Miraftab 2009; Jacobs 2019). What more radical portal into repair could there be than interrogating private property, given its role as a key pillar of both planning and structural racism? Using a Black/Decolonial theoretical framework for thinking about abolition, spatial transformation, and reparative planning, this paper is part of a collective response among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and for the world.

Citations

- Williams, R. A. (2020). From racial to reparative planning: Confronting the white side of planning. Journal of Planning Education and Research
Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric has the potential to incite violence against marginalized groups. Such legislative proposals are rife across many states of the US. What can planning do in the face of unjust laws? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Sandercock 1998; Beard 2003; Miraftab 2009; Jacobs 2019). But where, how, and what is radical planning in the current moment? This session focuses on unjust laws and asks: What can and should planners, across our subfields, do?

Objectives:

- To understand better how planning, as a field of scholarship and practice, is facing and challenging a new legal and policy terrain of unjust, oppressive laws, and changing our thinking and doing in various ways.

Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric has the potential to incite violence against marginalized groups. Such legislative proposals are rife across many states of the US. What can planning do in the face of unjust laws? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Sandercock 1998; Beard 2003; Miraftab 2009; Jacobs 2019). But where, how, and what is radical planning in the current moment? What is radical planning education? What is our responsibility as planning educators?

As a scholar who is trained in planning, yet teaches in the two fields of education and urban planning, this research-in-motion presentation focuses on pedagogical strategies for championing a more just approach to planning education in the face of unjust laws. This should not be confused with milquetoast, check-the-box diversity and inclusion efforts. Rather, this aligns closely with adrienne maree brown’s understanding of emergence as emphasizing critical connections and “the way complex systems and patterns arise out of a
multiplicity of relatively simple interactions” (brown, 2017, p.3), and reflects an evolving constellation of radical pedagogical choices. These everyday classroom decisions include the critical lenses through which we choose to analyze the effects of unjust laws, such as critical hope (Solnit, 2016); the consistent use of engaged pedagogies to share power with students (hooks, 2010); the community and activist groups we plan with when developing ideas for pushing back; and importantly, making real and ample space in our classes to rigorously imagine and work with others to “invent visions of what should be and what might be in our deficient society, on the streets where we live, in our schools” (Greene, 2000, p. 5) and take action. This last piece begins to answer the urgent call from so many students who express frustration that building these essential imaginative critical thinking skills and putting them into action is often viewed as less valuable than meeting technical proficiencies, meaning that facilitating this skill set development is absent from courses, seen as soft, or simply isn’t acknowledged as "real" planning curriculum. If “radical analysis points toward concrete, long-lasting solutions” (Anyon, 2014, p. 187), then radical pedagogies are one antidote to classroom spaces that stifle creative planning thinkers and practitioners. Indeed, these are the very kinds of fierce planning minds we need in the face of new and ongoing unjust laws, policies, and practices. This session examines the use of these pedagogies, with examples drawn from urban planning courses.

This paper is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and for the world.

Citations


Key Words: radical planning, planning education, pedagogy, spatial justice, justice

SPATIAL PLANNING AND DESIGN AGAINST INJUSTICE
Abstract ID: 1096
Abstract within Pre-Organized Session 71

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Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric has the potential to incite violence against marginalized groups. Such legislative proposals are rife across many states of the US.

What can planning do in the face of unjust laws? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Sandercock 1998; Beard 2003; Miraftab 2009; Jacobs 2019). But where, how, and what is radical planning in the current moment?

Attention to issues of justice in planning has often focused on a particular scale (local) and through particular group-affiliation (community-based). Often, considerations of space and the design of space have not been fully
appreciated (see, e.g., Goh, Loukaitou-Sideris, and Mukhija 2022). This research-in-motion presentation focuses on how a design-politics can be practiced in intertwined, coproductive ways. It looks at how urban design and spatial planning can be part of creating what might be called “counter-spaces of exception” (reading Kinder 2021 and Agamben 1998 together) among terrains of legal and policy injustice. We have seen the move to create “charter cities” and “seasteading,” as well as the Disney Corporation’s efforts to use its special improvement district to evade state laws in Florida. Much of these are fueled by visions of libertarianism or big corporate power. To what extent can a more justly liberatory visions be developed through conjoined spatial-political design?

I will treat this as a design-politics project, presenting specific urban design and political change works-in-progress propositions that challenge the limits of space and law.

This presentation is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and for the world.

Citations


Key Words: radical planning, spatial planning and urban design, spaces of exception, counterplanning, spatial justice

**DISCARDING PRAGMATISM FOR RADICAL ACCOUNTABILITY: PLANNING AGAINST UNJUST LAWS**

Abstract ID: 1097

Abstract within Pre-Organized Session 71

POLLANS, Lily [Hunter College, City University of New York] lily.pollans@hunter.cuny.edu, presenting author

Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. Recently, state legislators have proposed bills to ban abortion healthcare, trans healthcare, critical race studies teaching, and queer and trans representation. Beyond legislation, the rhetoric has the potential to incite violence against marginalized groups. Such legislative proposals are rife across many states of the US.

What can planning do in the face of unjust laws? Planning is generally considered to be institutionally driven, framed by normative ideas about what ought to be for society and state. What happens when such normative ideas are constrained and community members are actively in harm’s way? Of course, there are always allusions to community, civil society, a wider world of nonplanners too. And now a long tradition of thinking beyond normative ideas, through more radical planning (Sandercock 1998; Miraftab 2009; Jacobs 2019). But where, how, and what is radical planning in the current moment?

This research-in-motion presentation responds to the recent spate of laws criminalizing protest. Specifically, it considers the responsibility of planners in the context of escalating policy violence towards environmental and climate justice activists who are protesting expanded policing and fossil fuel extraction. Using discard studies—an interdisciplinary field that examines systems of wasting (Liboiron and Lepawsky 2022)—and radical and reparative
planning literatures (White 2020; Kondo 2012) as a launch point, I will attempt to anchor the phenomenon of planetary urbanization into a specific, tentacular, understanding of the spatially expansive extraction & waste networks that feed urban consumption. What if planners took responsibility for these networks as part of a process of local decision-making? What if institutional processes of project review recognized the full extent of the networked impacts of parking lots, power plants, luxury housing, and even solar installations? What if the designers of decision-processes included the residents of East Palestine, and neighbors of every sand mine, every fracking site, into local development decisions?

Rather than relying on increasingly vulnerable protesters to protect small pieces of intact ecosystems and counter-hegemonic cultures, what would it look like to internalize spatially dispersed risks into local planning logics? Until now, our tools for doing so—like the abstractions of marginal greenhouse gas emissions, or recycling rates—are woefully ineffectual. Of course, this proposal is wildly impractical. Of course no development would ever occur if the full impacts were considered. But this is precisely the point. In this paper, I will introduce key theoretical insights from discard studies that make legible and specific the invisible extraction and waste networks on which cities depend. I will also draw on the work of radical planning theorists to make a proposal for what a process of radical accountability to these spatially dispersed dependencies might look like.

This paper is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and for the world.

Citations


Key Words: climate justice, radical accountability, discard studies

PLANNING AS THOUGH THIS CITY LOVES US: VISIONARY FUTURES IN BLACK PORTLAND

Abstract ID: 1098
Abstract within Pre-Organized Session 71

BATES, Lisa [Portland State University] lkbates@pdx.edu, presenting author

Planning academics gather in Miami, Florida, amid a flurry of absurd and cruel legislation targeting the most vulnerable among us. After a summer of uprisings in 2020 the #RacialReckoning has met its backlash; with 2022 the most deadly year for police shootings since they were first tracked and recorded. West Coast cities that ‘flattened the curve’ with public health business and school closures are now chasing real estate investment to ‘bring back downtown,’ starting with the forced relocation of unhoused people away from tax-revenue generating locations. In Portland, Oregon, one of the nation’s most gentrified cities, where Black residents have been largely pushed out of their historical neighborhoods, where the Portland Police Bureau has been under Department of Justice oversight for over a decade, the 100 nights of protest of 2020 have given way to ShotSpotter policing technologies and new Urban Renewal Area declarations. The vaunted Portland Equity Lens has given way to planning-as-usual, assessing the city through what Fanon described in urban sociological study as ‘white eyes, the only real eyes.’ What can radical planning do in the face of these unjust laws and practices, particularly given the ways in which the synergies between police powers and redevelopment planning have originated in the very existence of planning? In this Research-in-Motion presentation I share experiences from a multi-year planning
project with Black Portlanders who are using visionary futures techniques to imagine a different concept of public safety in neighborhood planning. This project, rather than emerging from the traditional data and analysis practices of urban planning, is rooted in the work of W.E.B. Du Bois, Clyde Woods, and Robin D.G. Kelley; it is built in Black knowledge, theorizing, and data-gathering. I will share the questions and proposed epistemologies and methodologies from this community-rooted project that first asked, What would it be like if this city loved Black people? as part of a vision and advocacy plan; and its current project, to use visionary futures techniques to unlock a radical imagination of what neighborhoods would look, feel, and function like if they were built for Black communities and families’ safety. By lifting out of the incremental, daily project of pushing for police reform and anti-displacement policies, the group is attempting to define its horizon as an abolition future that insists “there is nowhere that love cannot find you.” In this presentation I will consider how the use of these future visioning techniques can help us to define immediate, concrete goals and projects that ensure that our planning processes do move us towards this north star. This paper is part of a collective response, across two sessions, among planning scholars thinking together about our collective and individual responsibilities in this unsettling moment for planning and for the world.

Citations


Key Words: social justice
and a Professor of Landscape Architecture and Planning, and an expert on the history of land use regulation, post-socialist city planning, and Jane Jacobs, will share her perspective as the recent Editor of the Journal of Planning History. Stephen Ramos, an Associate Professor of Urban Planning and Design at the University of Georgia and an expert on geographical and political issues concerning trade infrastructure, will share his thoughts as the Editor for the Americas of the journal Planning Perspectives. The roundtable will be moderated by Brent D. Ryan, Associate Provost and Associate Professor of Urban Design and Public Policy at the Massachusetts Institute of Technology, and Co-Editor of the Journal of Planning History.

Key Words: planning history, planning historiography, diversity in planning, gender and planning, planning scholarship

EXPLORING SACRED CIVICS: RE-IMAGINING THE SOUL OF PLANNING - A PROVOCATION

Abstract ID: 242

Roundtable

AGYEMAN, Julian [Tufts University] julian.agyeman@tufts.edu, Co-Author, moderator
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ROBERTS, Andrea [University of Virginia] aroberts318@virginia.edu, participant
GOH, Kian [University of California Los Angeles] kiangoh@ucla.edu, participant
WALSH, Elizabeth [University of Denver] elizabeth.walsh@gmail.com, participant
ENGLE, Jayne [McGill University] jayne.engle@mcmillan.ca, participant

Theme: Is inclusion what we really want? Or, beyond inclusion, is it the right to pursue wholeness, healing, reparation and regeneration? When we consider advancing 'inclusiveness in divided places and societies', are we clear and/or intentional about the "larger whole" we seek to include people in? Whiteness? Beloved Community? Bioregions characterized by radical resilience, radical interdependence? What is the emergent edge in planning?

As Grace Lee Boggs, the late Chinese-American community organiser and civil rights activist wrote:

"These are the times that try our souls. Each of us needs to undergo a tremendous philosophical and spiritual transformation. Each of us needs to be awakened to a personal and compassionate recognition of the inseparable interconnection between our minds, hearts, and bodies, between our physical and psychical well-being, and between our selves and all the other selves in our country and in the world... Each of us has to be true to and enhance our own humanity by embracing and practicing the conviction that... despite the powers and principalities that are bent on objectifying and commodifying us and all our human relationships, the interlocking crises of our time require that we exercise the power within us to make principled choices in our ongoing daily and political lives, choices that will eventually, although not inevitably... make a difference."

This panel will explore the potential of planning and planners to make such a difference, by re-imagining the soul of planning, by telling stories that re-shape conversations about inclusion and division, by imagining otherwise.

Nature and the sacred have long been banished from the city. ‘Can cities become the sites of wisdom, wholeness, and healing’ (Escobar)? How can planning and planners contribute to the transformative work of building just, Green Cities? What is the vision? What theory/ies of social change underpin this vision? What stands in the way?

Two recent books, the edited collection Sacred Civics: building seven generation cities (Engle et al, 2022) and Mapping Possibility: finding purpose and hope in community planning (Sandercock 2023) chart seemingly converging paths in looking at cities, human settlements and community planning as actual and potential sites of transformation, weaving together Indigenous ontologies, the relational turn in urban studies and planning, and decoloniality, to demonstrate that how we choose to live together, to recognize interdependencies, to build, grow, create, and love, all matters. These authors, plus discussants, want to generate a conversation about these
questions and more, and what this implies for re-imagining the soul of planning.

What is the emergent edge that we and many of our colleagues are dedicated to and excited by, for the continuing evolution of the field into the inner, the felt, the embodied, the whole, and the possible.

Starting with the body and personhood, are new ways of being possibly as important as ways of knowing and acting for planners as change agents, for transformative planning, as Wilson (2019) and Sandercock (2023) have recently argued?

(How much longer) can we avoid talking about the relevance of spirituality in planning? For example, connections between food, land, spirituality, culture, and environmental stewardship, in both Indigenous and Black resurgence.

And how do we deal with the proverbial elephant in the room for so many planning departments/programs:

How can a “planning otherwise” interrupt, end, or transform planning’s certifications and accreditation processes which inhibit creativity and changes in practice, scholarship, and teaching? How do we constructively critique the inadequacy of the limited equity and inclusion language in certification and accreditation processes?

Citations

- Sandercock, L. Mapping Possibility: finding purpose and hope in community planning (Routledge, 2023)
- Wilson, P. The Heart of Community Engagement (Routledge, 2019)

Key Words: Transformative, decolonial, love, pluriversal, creativity

PLANNING FOR THE WORLDS IN BETWEEN
Abstract ID: 987
Roundtable

BALAKRISHNAN, Sai [University of California Berkeley] sbalakrishnan@berkeley.edu, moderator
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PHELPS, Nicholas [University of Melbourne] nicholas.phelps@unimelb.edu.au, participant
SOTOMAYOR, Luisa [York University] sotomay@yorku.ca, participant
VAN MAASAKKERS, Mattijs [The Ohio State University] vanmaasakkers.1@osu.edu, participant
WHITE, Mia [The New School] miawhite@newschool.edu, participant

As part of societal divisions of labour and an activity distributed across a variety of public, private and citizen actors, urban planning is intimately connected with the production or receipt, regulation and enforcement of classifications and categories, not least because of the way states ‘see’. These classifications often pit one place against another, one person against another and one interest or identity against another in ways that suppress nuanced understandings and defy aspirations and possibilities for the fashioning of more inclusive, democratic/participatory and cosmopolitan cities.
The overarching theme of this roundtable discussion is that planning needs to contend with a sense of the urban that no longer corresponds neatly to limited often binary classifications (city/country; society/nature) and instead needs to renew itself with language, theory, policy and practices that work with forms, functions, processes, substantive concerns, ethical/moral issues that are decidedly ‘in-between’ or mixed: for the worlds between. A spectrum of alternatives and alternative classification of urban planning-related phenomena is always latent. Drawing on Bowker and Star (1999), the organizers will introduce the roundtable taking the ubiquity of (informal and formal) classifications in urban planning as a given, but asking panelists to lead a discussion with the audience speaking to the following questions:

1. What are the ideational motivations and material effects of classifications?

2. What are some of the examples of the indeterminacy of classifications?

3. What are the practical politics that attend the production, maintenance, contestation and replacement of classifications in urban planning theory, policy, practice?

4. How should we look to renew language, theory, policy or practice going forward?

Citations


Key Words: planning theory, formal/informal classifications in planning, planetary urbanization, new planning theories, indeterminacy of planning classifications

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**Track 13 Individual Paper Submissions**

**PLACE-BASED AND ADAPTIVE SUSTAINABILITY: A CASE STUDY OF REGIONAL WATER PLANNING IN TEXAS**

Abstract ID: 23  
Individual Paper

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Sustainability is necessarily a flexible concept; however, sustainable planning continues to rely on general principles of “good city form” that are readily coopted by profit-seeking agents (Gunder 2006). Instead, a place-based and adaptive approach is required, as advocated for by the National Research Council’s (1999) Our Common Journey. Despite the global or regional nature of threats (e.g. climate change), planning problems manifest locally,
often in response to a unique set of interactions among a variety of systems (MacGillivray 2015). Moreover, “the pathways...cannot be charted fully in advance. Instead, they will have to be navigated adaptively at many scales and in many places” (NRC 1999, p.3). Place-based planning is receptive to the heterogeneity of local and regional context, processes, and drivers. An adaptive process acknowledges the path forward must be continually revisited. How might such an approach look in practice?

To demonstrate these concepts, we present a case study of water planning in Texas. The state’s rapid growth and proclivity to extreme weather make it a bellwether example for other regions adapting to a changing climate. Moreover, its contemporary water planning legislation is considered to be among the most adaptive and supportive of local and regional water planning in the United States (Dyckman 2016). A review of historic and planned water consumption examines all 25 metros across the state. Historic water use comes from the Texas Water Use Survey while the 2002, 2007, 2012, 2017 and 2022 State Water Plans (SWPs) detail expectations regarding future population growth, water supply, sectoral demand, and supply strategies for meeting future needs.

A review of historic municipal water consumption shows remarkable variability across the state. From 1980 to 2018, Texas experiences a marked decline in municipal water use. The per capita municipal average declines 24% from 180 gallons / day to 137 gallons / day, but individual metro performance varies widely from a 50% decline in Corpus Christi, TX to an 18% increase in Tyler, TX. During this period, water plans show substantive change. Across SWPs, population estimates increase while forecasted water supply and demand decrease. Crucially, future strategies show a marked shift in how to meet future needs. Initially, surface water comprises two-thirds of future strategies. By the 2022 SWP, this drops to one-third, with large increases in water conservation and reuse expanding rapidly. However, these statewide trends mask diversity amongst regional plans. To illuminate how place and adaption intersect, detailed cases for two individual metro regions show how local context, new science, and emerging technologies result in unique, place-based outcomes.

The ambiguity of sustainability has contributed to its enduring role in planning (Campbell 2016). This work provides a link between sustainability and planning theory, articulating why conceptual flexibility is not only beneficial but also necessary. Though imperfect, regional water planning in Texas is a concrete example of place-based and adaptive sustainability, providing important lessons for sustainable planning beyond the environmental sector. Assumptions about growth, the role of technology, and human behavior all need continual reexamination. This process plays out differently across diverse contexts, so solutions should not be homogeneous. Place-based and adaptive planning is simpler and less contested in water planning than it would be for transformational land use, housing, transportation, and equity planning. Yet, key takeaways still apply. More than general solutions espousing the need for compact cities, a robust, well-funded planning apparatus is necessary, one that incorporates bottoms-up governance as well as top-down financial and technical support. Humility counteracts complexity, empowering local knowledge and opening the door to solutions currently conceived as impossible.

Citations

SEEING THE EVOLUTION OF PLANNING THOUGHT FROM 1980 TO 2020
Abstract ID: 30
Individual Paper

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The history of Planning thought and practice is full of significant achievements (e.g. Columbian Exposition, Chicago Plan, Model Cities) and dramatic disasters (e.g. urban renewal). When we turn our assessment to the last 40 years, everything starts getting blurry with very little dramatic “game changing” Planning innovations. (No; the internet, cell phones, nor driverless vehicles are Planning created innovations.) How has the state of the art of Planning thought and practice changed over the last handful of decades?

As a field of inquiry, the U.S. Planning literature is anchored by three journals all covering planning thought from 1980 to present: Journal of American Planning Association (JAPA), Journal of Planning Research and Teaching (JPER), and Planning Literature (PL). In this paper, we present findings from a two-part content analysis of JAPA, JPER, and PL and analyzed the history of Planning thought from 1980 to 2020. The first part of our research entails the execution of both a latent and manifest content analysis in the identified planning publications via an analysis of the table of contents per journal (Gaber, 2020). Second, we conduct a visual analysis of the journal covers during the same time period (Abrahamson, and Prior-Miller, 2015, Larsen, 1998). What is unique about the analyzed Planning journals in comparison to other academic journals, they all have images on their covers. JAPA, JPER, and PL literally provide historic visual scrapbooks on what Planning researchers think of themselves and how they would like to be perceived by the reading public (Goffman, 1959). At the completion of the two research actions, we triangulate the written and visual analyses to document convergence and divergence on how we as Planning scholars find important in our publications in relation to how we present our public image of self. In short, do we show what we write? And/or is it sequential; do we first show what we want to be perceived as, then follow it up years later with publications?

The value to this research is twofold. First, observations generated from this research provides a longitudinal assessment of what we (emic) have been thinking and documenting in the last 40 years. To put it another way, this research attempts to put bones on Planning scholars blurry sense of self for the last several years. Second, from this snapshot on what is the state of the art among Planning scholars, it opens up new vistas to discuss what needs to be addressed in the next 40 years of Planning scholarship.

Citations

- Gaber, J. (2020). Qualitative Analysis for Planning and Policy: Beyond the numbers, New York: NY.

Key Words: Planning history, content analysis, mixed method research
WHAT HAPPENED TO RURAL COMMUNITY AND REGIONAL DEVELOPMENT? THE EVOLUTION OF A PLANNING IDEA

Abstract ID: 60
Individual Paper

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Interest in regions as a field of study for scholars from across the social sciences began in the early 1900s and came into its own in the 1920s and ’30s. They saw regions as actual lived places with specific ecological, geographic, and cultural characteristics. A field of practice – regional development – emerged from their work. It took a comprehensive, reformist approach to addressing the problems of rural regions, combining environmental, socio-economic, and cultural goals. However, rural regional development has faded as an organizing concept in planning (Hibbard and Frank 2022), resulting in an urgent need to reinvent rural planning for the 21st century (Scott et al. 2019). We draw on a combination of primary and secondary sources to track the historic trajectory of rural regional development, with an eye to the implications for its re-invention.

Development planning as it emerged in the early 1900s was concerned with regions defined ecologically and/or socio-economically. It was interested primarily in resource management, including agriculture and recreation, and community life in rural areas (e.g., Morgan 1942). But in the early 1950s Walter Isard and others developed regional science (Teitz 2012). In contrast with the idea of regions as real places, regional science offered an abstract conceptualization in which types of settings, growth poles, core-periphery, and the like, differentiated by function rather than specific characteristics became the object of analysis. That view was challenged by the neo-liberal economic thinking that emerged beginning in the 1970s, which assumed that market forces would assure the flow of capital, goods, and people to wherever they could be put to their most productive and efficient use (Pike et al. 2017). The aim of regional development was to make metropolitan areas attractive for private investment. Rural development, to the extent it was thought of at all, focused on making rural economies resemble urban economies, through activities such as industrial recruitment. In sum, regional development planning became metropolitan planning.

But the Great Recession of 2008-10 has presented a need and opportunity to reinvent rural regional planning, to address the ongoing challenges of lagging regions and lagging areas. This history suggests that such a reinvention will entail recovery of the comprehensive, reformist approach to rural regions. This involves examining:

The concept of the rural region, including re-valorizing rural culture;
The concept of development, to include not only economic growth and also well-being according to the social, cultural, and political conditions of particular populations in specific places; and
Approaches to planning as generic problem-solving.

Citations

SURVEILLANCE TECHNOLOGY THREATENS DEMOCRACY AND IS A PLANNING ISSUE: PROPOSING A COMMUNITY LED CODE OF ETHICS FOR DATA COLLECTION

Abstract ID: 124
Individual Paper

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A growing ‘smart cities’ discourse in urban planning has promoted the embeddedness of urban space with technologies like pedestrian counters, license plate readers, automated transit fare systems and now ubiquitous surveillance cameras. Proponents of these technologies argue that their use to carry out tasks like improving traffic flow, managing parking, collecting consumer data, and surveilling public spaces for safety purposes creates a world of possibilities for “city developers [who] hope to make cities more responsive, efficient, sustainable and safe” (Halegoua, 2020). What this perspective does not address, however, are the growing concerns from legal experts that such data collection in public space presents significant threats to social justice and democracy (ACLU, 2018).

Many of these concerns are focused on the low level of accuracy that these technologies (including facial recognition and gunshot detection) are used with, and the disproportionate impact this has on communities of color (Brown, 2015). Concerns are also directed at the ways that data collected in public space—from surveillance camera footage to metadata collected through fare collectors—may be abused resulting in data breaches and even wrongful imprisonment. These issues have posed acute threats to democracy in recent years, as law enforcement agencies have both used their own surveillance infrastructure and appropriated the data collected in existing technology to arrest protestors and misidentify individuals using facial recognition software. These risks are particularly salient for groups who are racialized and disproportionately targeted by law enforcement, those who rely on public space for their livelihoods (such as street vendors and people who are unhoused) (Stuart, 2016; Mitchell and Heynen, 2009), and those who are in the process of reentry from incarceration and vulnerable to errors associated with these technologies that may place them back into incarceration.

While this surveillance and data collection is increasingly embedded in public spaces and public debate about their ethics has become heated, mainstream planning and urban design discourse has not fully embraced the threats to democracy and racial justice that are posed by the existence of these technologies—threats that are well within professional scope as they increasingly shape the way public spaces are produced and how products and services are consumed within them. This type of surveillance technology should be examined in light of professional ethics in planning and from the perspective of groups that are most vulnerable to the abuse of ‘smart city’ data. This paper will answer the following questions: 1) how do over surveilled communities and/or those vulnerable to the abuse of surveillance technology encounter such technologies in public space and what have been the consequences for them?; 2) how are practicing planners and urban designers involved in decision making, data collection, analysis and data management when it comes to these technologies?; 3) what are the legal consequences and threats posed by surveillance in public space?; and 4) how can planners be guided by vulnerable communities towards more ethical data collection practices? This work is a content analysis of interviews with legal advocates for surveillance oversight, members of surveillance vulnerable communities (including returning citizens, people who are unhoused, street vendors, racialized communities and others), practicing planners who develop and manage public spaces, and experts in planning ethics associated with main professional organizations in North America (e.g.: the American Planning Association and the Canadian Institute of Planners). Working together with legal advocates for surveillance oversight and communities that are disproportionately placed at risk by over surveillance, this paper will contribute to the expansion of the boundaries of planning as a discipline, proposing that planners should radically reconsider their roles and positions when it comes to the development of smart cities.

Citations

Key Words: Surveillance, smart cities, data privacy, social justice, planning ethics

THE REGIONAL PLANNING ASSOCIATION OF AMERICA AT 100 - COMMUNITARIAN REGIONALISM AS A DEFINING LEGACY
Abstract ID: 152
Individual Paper

LARSEN, Kristin [University of Florida] klarsen@ufl.edu, presenting author

The Regional Planning Association of America (RPAA) comprised a core group of experts on urbanism, design, economics, housing, and planning throughout its ten years of advocacy and implementation from 1923 to 1933. Their “collaborative genius” lay in their capacity to visualize this future, harness the progressive mindset of the day, and generate concrete steps to arrive at their collective goals. While their backgrounds and expertise varied, they ascribed to John Dewey’s philosophy of “learning by doing,” a reconnection to the land, a commitment to housing affordability and availability in complete communities, and the strategic implementation of technology to realize their goal of new towns in balance with nature. Communitarian regionalism defined their vision with the garden city transformed via technology to usher in a modern age free from economic hardship.

A lesser-known subsequent organization, the Regional Development Council of America (RDCA), was founded twenty-five years later in 1948 in recognition of the 50th anniversary of Howard’s Garden Cities. Primed for a postwar development surge, the RDCA’s ambitious agenda ranged from federal planning to urban renewal to community building for “productive defense.” This study applies a comparative analysis of archival materials, including review of efforts to sustain the RPAA mission during the bridging period when neither organization was active.

More specifically, I examine the accomplishments of the RPAA and characterize their contributions to provide context for a subsequent comparison to the RDCA. I do so by conducting a historical analysis of each organization’s minutes, member correspondence, notes, publications, policy documents, and other relevant materials. Further, I explore the period from 1933 to 1947 when neither organization was meeting. This bridging period consisted of ongoing collaborative accomplishments that informed the members’ postwar work together.

While the RDCA only functioned for four years from 1948 to 1952, the core membership consistently advocated for the regional city as the solution to a wide range of postwar challenges at the federal, state, and local levels. In doing so, their strategies addressed the increased professionalization and institutionalization of planning. At the same time, the RDCA sustained their focus on communitarian regionalism as the profession itself increasingly pursued economic development through expansionism that came to dominate the postwar era.

Differences and similarities between the RPAA and RDCA reflect critical parallels with and divergences from the planning profession, contributing further to our understanding of the core membership’s legacy. I explore that
legacy via their underlying philosophy of communitarian regionalism, in contrast to the metropolitanism and then corporate regionalism that came to define planning and development.

Citations


Key Words: Planning History, Regional Planning, Garden City, Communitarian Regionalism, Housing Policy

REPURPOSING THE GEOGRAPHY OF APARTHEID: INCREMENTAL VERNACULAR PLANNING IN A FORMER SOUTH AFRICAN BANTUSTAN

Abstract ID: 174
Individual Paper

CHAVEZ-NORGAAARD, Stefan [Columbia University] spn2121@columbia.edu, presenting author

Planning issue: Apartheid-era South African “Bantustans” were created in the 1960s and 1970s through dispossession and forced relocation to so-called “Native lands,” and then declared “self-governing entities” until the end of apartheid in 1994. As a former “Bantustan” capital, Mahikeng (formerly Mmabatho) was pre-planned as one such receiving site of forced relocation. Its built environment was designed to promote white supremacist “separate development” in regional political economy and subjugation of its relocated residents. In many ways Mahikeng’s built environment today still reflects these historic processes of what Mosiane and Götz (2022) call “displaced urbanization.” In other ways, however, Mahikeng’s built environment reflects subtle and sometimes explicit repertoires of struggle employed by historically relocated residents. This presentation draws on broader dissertation research where I explore the concept of repurposing to help explain residents’ grassroots popular-democratic responses to professional planning over time in Mahikeng. I ask: what historical antecedents explain contemporary repurposing in Mahikeng? And: Why, how, and through what means do residents repurpose urban space in Mahikeng, and with what consequences?

Approach and methodology: To explore repurposing, I draw on work by Pieterse (2008: 108–110) and Cirolia et al. (2021) who engage the concept directly, and Simone (2004) who has richly documented the “hybrid organizations” (421) and “reworked intersections” (415) animating city streets and state-society relations in the post-apartheid context. Interventions by the transnational planning “re-arrangements collective” (Cante et al., 2023) promote “affective agency within shifting and antagonistic urban constellations” (9), and I see Mahikeng residents’ repurposings similarly. Other scholars explore residents’ practices of social mobilization and organization to contest enduring racialized inequality by connecting everyday practices with structural contexts of post-apartheid South Africa and racial-capitalist urbanization (Oldfield, 2000; Ngwane, 2021).

I aim for a grounded empirical account of repurposing in Mahikeng. I conduct an extended-case study inspired by Burawoy’s (1998) scholarship on the Zambian copperbelt. Following Yin (2014: 24), this study’s methodology makes use of a single-case case-study research design with multiple embedded units of analysis: four Mahikeng neighborhoods that each possess different socioeconomic compositions and dominant planning actors. I consider
repurposings across time through critical archival readings, semi-structured interviews with residents and current and former civil servants, and in situ analyses of neighborhood built sites.

Findings: I propose that the historical antecedents of repurposing lie in Mahikeng residents’ necessary contestations to an apartheid-era urban planning system of racial modernism. Today, as in the past, elite planners advance multiple, dueling, incomplete planning paradigms for Mahikeng, and repurposing emerges out of necessity given these paradigms’ holes and injustices. How does repurposing occur? In some cases, residents and civic groups seek an institutionally legitimated forum for repurposing; in other cases, repurposing emerges through tried-and-tested tactics of transgressive recontextualization, themselves drawing on repertoires of contesting, mobilizing, and organizing. Mahikeng residents repurpose space through land-use innovations, novel aesthetic and symbolic forms, ephemeral activations, and territorial re-formulations of jurisdiction. Drawing on Flyvbjerg (2002)’s typology of power and planning outcomes, I assess consequences of repurposing in Mahikeng as dependent on the type of repurposing, civic and state actors involved, neighborhood, and class.

Implications: This dissertation explores limits to planning and the power of people and institutions on the ground to make and re-make urban space. Social movements, civil-society groups, dissatisfied urban residents, and even insurgent planners may find wisdom from former apartheid-era Bantustans residents’ longstanding playbook for re-appropriating unjust spaces. In this playbook lies an inclusive planning relevant to divided places and societies. Many regimes have relocated populations and planned urban spaces amidst deep animosity, aiming to construct a politics of division. Thus, this study of how space is repurposed in Mahikeng will echo globally.

Citations

- Mosiane, Ngaka, and Götz, Graeme. 2022. “Displaced Urbanisation or Displaced Urbanism? Rethinking Development in the Peripheries of the GCR.” GCRO Provocation #08, Gauteng City-Region Observatory, April. DOI: 10.36634/SVRW2580.

Key Words: Repurposing, South Africa, Democracy, Disposession, The Social Production of Space

SMART CITIES AS TERRITORIAL EXPRESSION OF THE LONG TWENTY-FIRST CENTURY
Abstract ID: 177
Individual Paper

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This paper builds on Arrighi’s analysis of systemic cycles of accumulation to position smart cities within the emerging cycle. He originally posited that the evolution of the world capitalist system on an ever wider geographical base has passed through four systemic cycles of accumulation in which capitalist and territorialist actors organized and reorganized themselves to overcome the limitations of the previous cycle. While capitalists employ territory only to the extent that it increases capital accumulation, territorialists employ capital only as a means to expanding territory. He also demonstrates that historic phases of world capitalism have alternated through extensive phases in which the territory encompassed by the system was expanded and intensive phases in which the system became deeper and more intricately structured.
Drawing on Zuboff (2020), this paper claims that the emerging systemic cycle of accumulation centers on surveillance capitalism, a strategy of capital accumulation that relies on maximal extraction of behavioral surplus to generate and exploit predictive behavior and typified by the large internet platform firms (e.g., Meta and Alphabet). The paper first argues that these firms have built on the transnational strategies of the US-led phase of accumulation to supersede the US regime through a new fusion of the territorial and capitalist logics of power. As firms, these platforms clearly embody the capitalist logic of power in which territory serves simply to expand profits. In keeping with Arrighi’s implication that the new systemic cycle of accumulation will be extensive, the firms of surveillance capitalism strive to expand their access to new territory on the global scale to maximize behavioral surplus and thus capital accumulation: our inner lives and behaviors. They defend this new territory with their own cyber and physical security. To the extent that the old form of territory remains relevant, the platform firms adopt the practices of the earliest world capitalists, the Genoese, by partnering with a large territorial state (chiefly the US and China) for war-making. However, the territorial logic of power is also embodied in these firms, as they employ their capital with the goal of expanding their territory and capturing more behavioral surplus.

The paper’s second argument is that the platform firms’ territorial expansion is taking increasing physical form, specifically urban form. The insistent drive to capture ever more behavioral surplus has induced platform firms to continuously encroach upon and stitch together our physical spaces by collecting data from cell phone sensors, virtual reality goggles, and smart TV scans of our living spaces, by building spatial and behavioral maps with home security systems, and ultimately by constructing smart cities designed to capture our every move and gesture. Smart cities are a territorial gold mine for surveillance capitalists, as their systems of management allow for both the extraction of behavioral surplus and the management of consumer behavior. As this nearly closes the loop between information and control, smart cities internalize governance or state-making costs, enabling platform firms to supersede the US cycle of accumulation.

Citations

- Zuboff, Shoshana. 2020-03-03. The Age of Surveillance Capitalism. Hachette Book Group USA.

Key Words: smart cities, systemic cycles of accumulation, territorialist logic of power, capitalist logic of power, surveillance capitalism

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**BETWEEN STEWARDSHIP AND LEADERSHIP: THEORIZING THE ROLE OF CIVIL SOCIETY ORGANIZATIONS IN PLANNING**

Abstract ID: 228
Individual Paper

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This paper addresses the question of how we should theorise the role of civil society organisations in plan-making and decision-taking processes. The paper draws on recent research conducted in the English context, developing an understanding of how effectively civic societies engage in planning processes.
Civic societies are place-based voluntary groups, which engage in actions to champion the quality and the built environment of places (Civic Voice, 2020). They have built a reputation for aiming to protect built heritage, linked to a historical inter-relationship with the formal institutionalisation of planning and the planning profession in the United Kingdom, from the early 1900s onwards (Hewitt, 2014).

As a movement, they are a relatively longstanding example of a professionalised type of civil society organisation that sits between the general public and the formal, institutionalised planning system. Other examples of such organisations with an interest in the quality of the built environment might include resident groups, outdoor recreation groups and community planning groups, all characterised by a more or less institutionalised structure and membership based on shared interests.

To explore how such groups engage with planning processes, both formally and informally, a questionnaire was administered to all members of the umbrella organisation Civic Voice, collecting quantitative and qualitative data from 59 societies in England. Our analysis to date has shown (Maidment & Chettiparamb, 2022) that English civic societies often include members from built environment backgrounds, including architects and planners. Consequently, they have a notable ability to draw on professional expertise and institutional knowledge to engage more deeply in planning processes.

The analysis also shows that societies vary in their relationship with their community; in how they organize themselves; and in their relationship with decision-making in planning, leading the authors to develop a typology of civic societies reflecting these variations. In turn, this provides a basis for theorising in a more nuanced way about how such civil society organisations are involved in planning processes.

To develop such a theory, we start from the argument that, in thinking about participation, it is insufficient to think about such organisations as part of the general public, recognising that their varying level of institutionalisation will often allow them to navigate formal systems of planning to advance their interests with much more ease than other stakeholders. We want to highlight the potential of such organisations to act as a counterpoint to a system increasingly driven by economic efficiency (Sager, 2016), whilst being cautious of their potential to be homogenous in their membership and less than progressive in their interests.

We therefore put forward a theoretical framework that synthesises the concepts of place leadership; the level of engagement of civic societies in formal processes of governance to safeguard and promote place qualities and place stewardship; the responsible long-term management of place qualities, to ensure the preservation of a sense of place, by advocating, and promoting qualities associated with such a sense of place amongst the wider community.

We place this in the context of volunteerism and tendencies for formal engagement in the planning system toward ‘serious leisure’ in the often onerous levels of commitment required (Parker et al., 2020).

In doing so we seek to understand such organisations as an interstitial layer between the ‘abstract’ general public and the formal institutions and machinery of planning. We therefore argue that developing a stronger theorisation of their role is critically important to the wider evolution of participative theories of planning.

Citations

- Civic Voice (2022) Civic movement. Available at: http://www.civicvoice.org.uk/about/civic_movement/ (Last Accessed: 03 April, 2023)
at:https://www.henley.ac.uk/news/2022/civic-societies-and-the-planning-process (Last Accessed: 03 April, 2023)


Key Words: Civil society organisations, Participation, Place-stewardship, Place-leadership, Volunteerism

CORRIDORS AS EMPTY SIGNIFIERS: THE ENTANGLEMENT OF MOZAMBIQUE’S COLONIAL PAST AND PRESENT IN ITS DEVELOPMENT CORRIDORS

Abstract ID: 263
Individual Paper

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In this paper, we examine the continuities between three contemporary transnational corridors centered on three Mozambican cities and earlier, colonial-era transitways that linked the three cities to British colonial interests in southern Africa. We explore the persistence of corridors as an infrastructural tool through the notion of an ‘empty signifier’: a free-floating container of multiple meanings, histories, and practices. Our study draws on several phases of qualitative research conducted during the past decade in southern and central Mozambique, along with review of archival records, official reports, working papers, local and national news stories, and websites of the three contemporary corridor initiatives analyzed in the study.

Underpinned by physical infrastructures – e.g., railways, roads, or ports – transport corridors were central to the extractive European colonial enterprise in Africa. Corridors facilitated the flows of resources, goods and knowledge between metropoles, African urban centers, and their hinterlands. Nowadays, corridors insert African cities and regions into global circuits of capital and commodities that perpetuate past extractive practices and policies. They are also powerful symbolic spaces for advancing political projects and developing specific configurations of government. Accordingly, the idea of a corridor may remain useful over time, even as claims for their economic necessity ebb and flow.

Our study draws on three case studies in Mozambique to examine the continuities between contemporary Mozambican corridors and earlier colonial transitways, established by Portuguese colonial planning authorities, which connected three cities to British colonial interests in southern Africa. The three corridors were central to the Portuguese colonial enterprise in Mozambique, especially after the Second World War. Then, drawing on Laclau and Mouffe’s discourse analysis, we suggest that corridors can serve as ‘empty signifiers,’ becoming linked to diverse understandings, standing for fluid yet enduring ambitions of connectivity, competitiveness, and regional integration. The concept makes it possible to explain how certain words or phrases acquire political importance, and how ongoing political struggles seek to establish the definition of certain terms, giving them relevance for planning and wider political processes. Our findings suggest that the three corridors represent a layered set of ambitions in colonial and post-colonial Mozambique that have deeply structured the country’s economic geography and planning efforts to date. After scrutinizing recent investments in the corridors, we reflect on their role in the construction of a ‘new’ Mozambican economic order that is nevertheless deeply entangled in the country’s past.

In the cases we examine, the corridor as empty signifier comes to embody, through its physical design and material context, a hegemonic vision of seamless connectivity for spaces with potential high capital value. Given the signifier’s ‘radical contingency,’ however, it becomes difficult to catalyze and stabilize. Corridors offer a fluidity of meaning, under which a range of projects can be articulated, promoted, and linked together, often through
idealized spaces. Yet, as the meaning of an empty signifier cannot be entirely fixed, this opens an avenue for contestation over these corridors, and the possibilities of counterhegemonic narratives and practice. While such opportunities gain momentum at certain times, this space is suggestive of the progressive and creative potential that corridors may hold amid ongoing territorial reconfigurations and their uneven effects on local communities.

The study accordingly has significance for links between colonial and post-colonial urban and regional planning ambitions in Africa, the connections between discourse and power, and uses of post-structuralist discourse analysis in planning and development theory in post-colonial contexts.

Citations


Key Words: development corridors, discourse analysis, infrastructural state, Southern Africa, Eurafrica

THE INTERSECTION OF CHURCH AND NEIGHBORHOOD: THE CATHOLIC PARISH AND RACIAL AND RELIGIOUS TURMOIL IN TWENTIETH-CENTURY DETROIT

Abstract ID: 280
Individual Paper

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Over the twentieth century, the Catholic Archdiocese of Detroit served as an urban planning agency by planning the city around Catholic parish neighborhoods (Tentler, 1990). Using archival, oral history, and historical mapping methodologies, this paper studies how Catholic parish neighborhoods often paradoxically served as both places of refuge for European Catholic immigrants against a hostile Protestant national landscape and tools for excluding Black migrants arriving from heavily-Protestant regions of the American South. This paradox created an urban planning challenge for the Catholic Church: How does a religious institution plan for a rapidly racially and religiously diversifying city? More broadly, how do planners make decisions when there are multiple, often paradoxical, perceptions of space, particularly in relation to racial and religious identities?

In the United States, Catholic immigrants forged parish neighborhoods as a separate space from the dominant Protestant framework. Many European Catholics centered their lives around the Catholic parish neighborhood, which was anchored by a Catholic parish church, community centers, and, notably, parochial schools (Sugrue, 2014). While Black Protestants often attended different churches within and outside of the neighborhood and thought of their neighborhood with different anchors and boundaries, they advocated for access to the parochial schools, which were considered superior to Detroit’s public schools and seen by both Catholics and non-Catholics as vehicles for economic mobility (McGreevy, 1996).

While the Catholic Archdiocese of Detroit issued calls for racial inclusion, parishioners in many neighborhoods actively resisted the racial integration of both the neighborhood and parochial schools (Dillard, 2007). Parish councils, consisting of parishioners elected to represent the parish, played a role akin to neighborhood associations in many parish neighborhoods and often consulted in decisions for or against integrating schools and other
facilities. For example, in some Polish-speaking parishes, parish councils opposed racial integration, using a lack of Polish language skills as the reason (Vinyard, 1998). In other, often newer, parishes, parish councils cited that integration would lead to a decline in housing values. In contrast, parish councils in some parishes created innovative plans that pursued racial integration through the physical design of shared space such as the strategic placement of community centers that created opportunities for interaction and the merging of resources. The Archdiocese of Detroit also staged interventions by designating parishes as models of integration. These parishes hosted interfaith meetings to establish collective decision-making across different religious communities and combat exclusionary practices such as redlining and blockbusting. By incorporating varying definitions and perceptions of neighborhood boundaries, landmarks, accessibility, and belonging across racial and religious groups, this collective community organizing expanded where and how the Catholic Archdiocese of Detroit provided community services and met community needs.

By considering the Catholic Archdiocese of Detroit as an urban planning agency, this paper demonstrates how religion shaped Detroit and uncovers how, in an increasingly diverse and multicultural world, planners can use multiple narratives across many communities to create a shared vision of a neighborhood. Neighborhoods with parish councils that pushed against the integration of schools and community facilities often experienced the mass departure of White parishioners to the suburbs and closures of Catholic neighborhood facilities during the 1970s and 1980s. On the other hand, neighborhoods with parish councils who worked with other racial and religious groups to incorporate multiple ways of defining the neighborhood and identify critical needs and resources were better able to sustain both neighborhood vibrancy and maintain Catholic facilities. This paper, by investigating how the Catholic Church planned neighborhoods in Detroit, reveals how planning processes can incorporate and negotiate different perceptions of place in order to create a collective future of a neighborhood.

Citations


Key Words: neighborhood, religion, race, Detroit, history

WHERE RUBBER MEETS THE ROAD: DOCUMENTING THE IMPACT OF COMMUNICATIVE PLANNING IN PRACTICE

Abstract ID: 284
Individual Paper

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Since the 1980s, planning scholars have pushed practice predominantly in one direction. Drawing on Communicative Rationality and Alternative Dispute Resolution, these scholars have developed a set of dialogical techniques intended to give planners practical tools for framing public disputes and managing community dialogue (Innes & Booher, 1999). However, the extent to which practitioners have adopted these techniques is unclear. Moreover, these techniques are limited in terms of their ability to support plan implementation in contentious and
polarized political contexts, and to create space for conflict over consensus, among other important critiques (Fischler, 2014). Practicing planners lean heavily on a variety of interpersonal skills in order to bridge the gap between what they are taught and what they experience on the job (Hoch, 1994). Recent scholarship has emphasized the importance of emotional intelligence in this type of communicative planning work to show the deficits and opportunities in planning practice and education (Lyles & Swearingen White, 2019). This paper builds off this recent work to study the guidance professional planners are receiving from the American Planning Association on interpersonal skills. The purpose of this paper is to document the saturation of these skills and techniques in practice in order to identify opportunities for improving planning practice and research.

This paper considers interpersonal skills to be a broad set of communications, management, leadership, engagement, and political capabilities that both employers and educators agree need to be part of virtually every planner’s repertoire (Greenlee et al., 2015). The American Planning Association is often a reflection of current practice and an inspiration for it; therefore, we analyzed guidance documents published by this professional organization since 2001 to assess how it has characterized interpersonal skills for practitioners. We analyzed Planning Advisory Service Reports, Memos, QuickNotes, and issues of Planning Magazine because they provide plain-language support for planners to improve their practice. We screened these documents for inclusion in this study using keywords for various interpersonal skills (e.g., outreach and organizing). Documents were tagged as either “guidance” (the document offers some amount of actionable information) or “mention” (the document simply refers to “engagement” or “communication” without actionable steps). We then coded these documents using an inductive coding approach to identify themes contained within the documents related to interpersonal planning skills.

Findings suggest that the rational model remains the dominant paradigm although there has been some adoption of communicative planning in practice. The guidance offered in these publications on interpersonal skills can largely be characterized as either normative or procedural. Normative guidance includes directives, call-to-action, and references to the Planners’ Code of Ethics to implore planners to pursue some virtuous course of action. Procedural guidance includes step-by-step instructions, tools, and technologies. In both cases, guidance is high-level, limited, and tends to focus on how an assumed extant skillset can be leveraged towards some specific aim (e.g., disaster mitigation, using technology in planning, etc.). There is little attention paid to navigating relationships, contentious politics, or building trust on a one-to-one level. Content from these publications focuses exclusively on collaboration and consensus, rather than on the fine-grained interactive aspects of conflict and/or politics, as has been recommended by numerous planning scholars for the last forty years.

This work documents an important aspect of the theory-praxis gap. In spite of the communicative model’s relative longevity, it remains underutilized in practice and important critiques are all but missing from its limited implementation. If innovations in theory are to transform practice, better integration between the two is necessary.

Citations

POWER OF PERSUASION: HOW PLANNERS SHAPE PLANNING-RELATED DECISIONS THROUGH COMMUNICATION

Abstract ID: 413
Individual Paper

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Most planning decisions are ultimately made by politicians, rather than planners (Han et al., 2021). The lack of compelling political power hinders planners' ability to effectively solve urban crises and contribute to the progressive advancement of society (Grooms & Frimpong Boamah, 2018). To overcome this obstacle, planners need to either run for office or effectively influence politicians. However, few planners pursue political careers, and our understanding of how they can effectively engage with and influence politicians is limited.

Previous studies have either overlooked the role of planners in politicians' decision-making or neglected the dynamics of communication between planners and politicians (Han & Laurian, 2023; Lyles, 2015; Eräranta and Mladenović, 2021). Consequently, the extent of communication between planners and politicians and the influence of such communication on planning-related decisions remain unclear.

This paper uses a distinctive dataset consisting of all email correspondence among key decision-makers involved in local development projects in Tallahassee from 2011 to 2017. The data enables the tracking of email communications between city commissioners (i.e. high-level politicians and decision-makers), planners, government officials, and private entities. Furthermore, the study collected meeting minutes from city commission meetings during the same period, documenting each commissioner's vote on decisions made at these meetings.

Employing cutting-edge text mining techniques and the innovative Temporal Exponential Random Graph Model (TERGM), we probe how email communications between planners and politicians influence the voting patterns of politicians in planning-related decisions. Text mining helps identify topics and quantify sentiment from email exchanges, while TERGM accounts for interdependencies within and between communication networks over time. Our model examines whether communication frequency and sentiment between a planner and a politician influence the politician's subsequent vote in planning-related decisions, controlling for other factors. We also assess the effectiveness of specific communication tactics, such as communication from multiple planners or repeated communication from one planner.

This study provides novel empirical evidence on the extent to which planners can gain political leverage through strategic communication with politicians. The findings contribute to advocacy and communicative planning theories and shed light on the relationships between planners, politicians, and power. The communication tactics explored offer practical guidance for practitioners seeking to effectively communicate with politicians, which can help planners advance social equity and justice agendas.

Citations

SYNTHESIZING CONJUNCTURAL STATE IN URBAN INFORMALITY: A RE-THEORIZING EXPERIMENT WITH GUANTING STREET

Abstract ID: 430
Individual Paper

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Growing attention is being paid to theorizing urbanity otherwise. The attempts trying to create new epistemologies of the cities have emphasized questions such as “theorize with whom” and “theorize from where”, and thus respectively proposed to co-produce urban knowledge with local communities and remake urban intellectual maps from overlooked cities (Cupers et.al, 2022, Robinson, 2006). Illustrative as these studies may be, the existing approaches to theorizing elsewhere remain an attitude of ignoring, if not abandoning, the established structural theories/theorizing approaches. Less radical it may sound, a post-post structuralist stance of re-theorizing urban knowledge can also mean reworking theories from a dialogical stress-testing with the structural theorization approaches as well as established urban theories.

This study, therefore, is a "playful" theorizing experiment of urbanity. Specifically, it follows Peck’s proposal of synthesizing cities conjecturally (Peck, 2023). Following Sayin et al.’s initiative of "doing comparative urbanism differently" (Sayin et. al, 2022), this paper brings two urban theories with quite different origins to an ordinary city, builds a conversational encounter between the two, and expands the imagination of theorization accordingly. The case of this study is Guanting Street, an informal food market in Hefei, a middle-sized city in the middle of China, which yet has been long in the periphery of urban studies.

The question this paper tries to unravel is how the state plays a role in this informal food market. Theoretically speaking, this paper respectively picks urban political economy, which decodes the logic of the state from a top-down perspective and through rational decision-making choices, and everyday stateness, a bottom-up and ethnographic perspective which reads the state as fragments that got produced in the relational power practices (Painter, 2006). The paper then tests the explanatory power of both theories regarding the reality of Guanting and showcases that both are able to demonstrate part of the story yet fail to explain everything, even if combined together in a symmetrical way. Accordingly, the paper then builds a conversation between the two’s theoretical impotence and synthesizes a new "middle theory" of how the city government exercises power over Guanting, an informal food market in the heart of the city.

Simply put, I argue that the Hefei city government strategically manipulates its presence and absence on the street according to a cost-benefit analysis. However, this strategy is only possible on the condition of "differentiated
statenesse” on the street's everyday life. That said, multiple power brokers of the government make up multiple embodiments of the state with different levels of formality, which essentially maintain a complete ideology of the state even if the state has nominally retreated from the street. This power landscape weaves the state's strategy into a whole, yet this whole is an ambiguous assemblage with numerous faces embodied by different local bureaucrats on the ground.

This paper has an implication on general planning theories that re-working planning theories from an existing theory fails to jump out of the structure that the previous theory offers, while theorizing from a completely new realm runs the risk of academic discontinuism. Thus, synthesizing theories conjuncturally may provide an alternative middle-ground for a more consolidated, yet no less radical path to theorizing otherwise.

Citations


Key Words: Creative Urban Theories, Comparative Urbanism, Conjunctural Cities, State, Urban Informality

CHINA’S OVERSEA PLANNING PRACTICE SINCE THE 1990S: A RETROSPECTIVE STUDY FROM THE PERSPECTIVE OF PLANNING KNOWLEDGE FLOW

Abstract ID: 468
Individual Paper

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China has been exporting its planning experiences to other countries since the 1990s through the development of industrial parks and later other kinds of economic and trade zones. Such phenomena echo the transnational flow of planning ideas and experiences or traveling planning ideas since the early 20th century, which has been a hot spot in the international planning study field from the beginning of the 21st century.

Introducing a research perspective of planning knowledge flow, we define the practical planning knowledge as regards to the transnational flow of planning experiences. Correspondingly, we argue the mechanism of practical planning knowledge flow can be studied through its type, flowing channel, participants and their functions, and flowing process in the context in which the planning knowledge is generated. China’s oversea planning practice since the 1990s is taken as a case study.

We interviewed a number of planners, researchers, and informants on China’s oversea planning practice and collected related data since the 1990s through publications, online databases, and other sources. On this basis, we divide the process from the 1990s to the present into three stages in terms of the key social and economic events and changes since China's Opening-up in 1978.

Respectively, stage one, in the context of China embarking on the establishment of a socialist market economy, is characterized by the pure export of planning forms, technologies and experiences through study tours and overseas projects organized by government or enterprise. Stage two, in the context of China’s active participation...
in international development cooperation after its accession to the WTO, is characterized by the export of planning standards, systems and experiences through standardized overseas projects, training, and seminars. In this stage, more entities such as planning agencies, colleges, and international training organizations participate in the process of knowledge flow under the increased government support. Stage three, in the context of China's Belt and Road Initiative, is characterized by the export and integration of practical planning knowledge through multiple methods organized by multiple entities under the co-prosperity with the local place of the import country.

We argue that the general trends of China’s oversea planning practice development are as follows. Firstly, more and more countries are involved, and the types of planning covered are enriched. Secondly, China’s practical planning knowledge flowing overseas are expanded both from the field of planning and construction to that of pre-study planning and post-management operation and from explicit to implicit practical knowledge.

Our case study provides a good Global South example to the transnational planning ideas and experiences study generally. We also have tried to examine the cross-border flow of planning experiences through a distinct and probably new perspective, the knowledge flow.

Citations


Key Words: planning knowledge, knowledge flow, planning experiences, China’s oversea planning practice, international exchange

NEGOTIATING NATIONALISM AND IDENTITY: EXPLORING THE IMPACT OF RELIGION AND ETHNICITY ON URBAN PLANNING IN THE POSTCOLONIAL WORLD

Abstract ID: 585
Individual Paper

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Postcolonial urban landscapes are profoundly shaped by colonialism, nationalism, and people’s spatial practices. Continuing histories of imperialism and struggles for decolonization have further complicated the sociocultural relationships (Fanon, 2009) and their spatial dynamics in the postcolonial world (Prakash, 2010; Robinson, 2003; Roy, 2011). The local, native scholarship has largely countered the Eurocentric understandings of such societies developed under colonialism with tradition; however, this oppositional discourse takes the same path the colonial cultures have already mapped (see Eagleton, 2000). However, the effects of nationalism on urban planning, design
and shaping the urban landscape in postcolonial countries have yet to be extensively explored. Our study looks into the nationalist influence on postcolonial urban planning in Sri Lanka to fill the intellectual gap.

This research examines the effects of nationalism, ethnic identities, and religious expressions of space on planning and place-making in postcolonial Ceylon (Sri Lanka since 1972) by examining the planning of the nation’s first postcolonial urban community, the 1949 New Town Plan of Anuradhapura. We examine the production of modern Anuradhapura, one of the most ancient capitals that has been elevated to a national heritage in the late-nineteenth century. This Buddhist pilgrimage destination and capital of an interior province offer a unique opportunity to study the intersection of colonial and nationalist spatial expressions. This research investigates the powerful and often tense relations between national and colonial spatial expressions in postcolonial countries, examining how the national spatial claims interacted with and were inspired by the colonial planning discourse in South Asia.

We developed this research using a methodological fusion of discoveries obtained through archival research and ethnographic field studies we conducted in Sri Lanka in 2017 and 2019. We searched through archival materials, primarily Sri Lanka’s National Archives, to assemble primary sources, such as government papers, planning reports, and media coverage associated with the planning project. The fieldwork was comprised of interviewing the residents, planners, and city administrators of Anuradhapura to understand how the policies, practices, and ideas were integral to the new town’s planning scheme. This paper attempts to evaluate the new town’s layout plan to investigate the relationship between colonial planning discourse and the nationalist ideals of postcolonial spatial thinking in Sri Lanka.

Through its contribution to the fields of history, theory, and international development planning, our study has highlighted the profound effects of colonialism, nationalism, and people’s spatial practices on the postcolonial urban experience of the people. This sheds light on the conflicts and intricate interconnections between these countries’ national and colonial spatial expressions and the necessity to comprehend these dynamics to generate more comprehensive and inclusive urban planning processes. Finally, it demonstrates the significance of utilizing a blend of archival research and ethnographic field studies to comprehensively examine the relationship between colonial planning discourse and postcolonial spatial thinking in urban planning.

Citations


Key Words: Postcolonial, Colonial Spaces, Colonial Planning, Nationalism, Place Making

MULTIPLE TEMPORALITIES IN CLIMATE PLANNING: BRINGING LONG DURÉE HISTORIES OF THE BUILT ENVIRONMENT INTO FOCUS

Abstract ID: 645

Individual Paper

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There is a lively discussion in the history departments, in which urban planning historians are primarily impartial. With the increasing pressures of environmental and social crises in the world, a group of historians has once again
turned their attention to the merits and necessities of using long durée temporalities. This shift is primarily highlighted by the systemic changes that have had several disruptive moments since the beginning of the 21st century. The increasing intensity of climatic fluctuations, manifesting as unprecedented environmental abnormalities or wars that broke out from long-brewing economic and environmental inequalities, have brought historians and social scientists closer to natural sciences. At the same time, the rise in digital humanities and historical GIS applications presents opportunities to work in trans-disciplinary frameworks and opens new windows for trans-temporal analyses. As renowned historians Jo Guldi and David Armitage wrote in their grand History Manifesto, the long durée, as a temporal scale in research, is back with greater dynamism and flexibility since the beginning of the 21st century. Not only is it back in scholarship, but it is also emerging “within a very different ecosystem of intellectual alternatives.” This paper argues that despite its relatively brief history, the discipline of urban planning needs to integrate a multi-temporal approach to understanding physical, geological, and demographic trends in the twenty-first century. While the most impactful tools in planning practice, such as comprehensive and strategic plans, seem to already work on multiple temporal timelines, the long durée mentioned here is not about phasing planning actions. It is about how planners have engaged with historical time in the built environment since the proliferation of the profession in North America. The disappearance of geological knowledge from mainstream planning education and planners’ scope has been a massive roadblock in our engagement with long-durée. This paper suggests a framework for long-durée engagement in planning, which frames geological and ecological time together. Two temporalities intertwine here. Cyclical but seemingly sudden changes in land, water, and climate observed as patterns over a few centuries would demand non-Euclidean understandings of land use and zoning.

Citations


Key Words: climate planning, long duree, multiple temporalities, geological time, planning history

FOOLS, ASSETS, CRIMINALS, AND LEADERS: HOW DO COMPREHENSIVE PLANS CONCEPTUALIZE YOUTH?

Abstract ID: 658
Individual Paper

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Youth are an important segment of the population with distinct needs and perspectives. Scholars increasingly argue that youth have a right to the city and deserve a means to participate in shaping their communities. However, there is a lack of research analyzing how and if the urban and regional planning discipline supports such youth inclusion. This paper begins to fill this gap by analyzing comprehensive plans – one of the landmark tools of the urban and regional planning discipline – through the lens of an anti-adultist theoretical framework. This paper asks 1) how discussions of youth in comprehensive plans represent adultist and/or anti-adultist themes; 2) in what planning domains youth are discussed within comprehensive plan text; and, 3) whether places with similar population characteristics discuss youth similarly within their comprehensive plans. These research questions are answered utilizing manifest and latent content analysis of Maryland county (n=23) and municipal (n=108) comprehensive plans, supplemented by correlational analysis integrating US Census data. Results show that comprehensive plans sampled largely do not reflect anti-adultist principles and rarely allow for youth leadership.
and/or participation in planning processes. Out of 131 plans analyzed, only 10 (7.63%) reflect anti-adultist perceptions of youth (including youth as leaders and/or codifying a means for youth participation in planning processes). Meanwhile, almost half of plans (45.80%; n=60) include adultist perceptions of youth (villainizing, infantilizing and/or commercializing youth). Youth are most frequently included in plan text within the planning domains of workforce and the economy, housing, and recreation. Youth are most frequently excluded from plan text which discusses the plan creation process, population characteristics, and health. Youth are more likely to be discussed within county plans compared to municipal plans. While all county comprehensive plans include at least one textual reference to youth, over one quarter of municipal comprehensive plans (27.78%; n=30) omit any discussion or reference to youth. The number of times youth are discussed in comprehensive plans is statistically significantly correlated with the percentage of the population between the ages of 15 and 24, poverty rate, rate of youth living in households below the poverty line, and population density. The percentage of youth of color living in a locality is not correlated with the number of times youth are discussed, villainized or treated as leaders in comprehensive plans. While this paper adds to the literature by applying the theoretical framework of anti-adultism to assess youth inclusion within urban and regional comprehensive plans, it is necessary to engage in further research which directly captures youth voices and documents how youth themselves would like to be included in shaping the places in which they live, work, and play.

Citations


Key Words: anti-adultism, comprehensive plans, content analysis, youth inclusion, ageism

KILLING ME SOFTLY: WHEN WE WRITE PLANING HISTORY, WHAT STORY ARE WE TELLING?
Abstract ID: 677
Individual Paper

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Planning historians tend to study exceptional places. As a result, “a disproportionate amount of what we know has been based on studies of international developers, downtown projects, and globally connected cities.” (Parsons and Harris, p262, 2020) This suggests we may have written a narrow history of planning. This paper asks two questions in response. One, how might detailed histories of small and unremarkable plans change our view of planning? Two, what does our lack of attention to such plans reveal about what is deemed appropriate subjects for planning history (Rybczynski 2008)? It uses the concept of vernacular planning as a way of framing the unremarkable plans written in places not typically studied.

A corollary lies in vernacular architecture. Vernacular structures, whose designers are unknown or misidentified, comprise the bulk of the built environment. Yet as individual objects they are usually ignored, becoming a backdrop within which everyday life unfolds. Vernacular buildings often gain meaning in highly subjective and intimate ways. As Gaston Bachelard remarked, these kinds of structures are “physically inscribed in us” (p14, 1969). We can think about vernacular plans in a similar way. Plans that are part of the common currency of the
practice of governance, intimately familiar as the blueprints for spaces of everyday life, yet mostly ignored. They are formed in practice. These plans function like habitus, with an “embodied history, internalized as a second nature and so forgotten as history.” (Bourdieu, p56, 1990)

To better understand vernacular plans this paper explores the creation of Somerset, a New Urbanist-style subdivision in Ames, Iowa. Proposed in the mid-1990s, the subdivision was a response to the city’s then-new comprehensive plan, which centered the idea of mixed-use villages as the preferred form of new development. Somerset was the city’s first major project under the guidelines of the plan, and the first attempt in Ames to build an intentionally mixed-use neighborhood since before World War II. I treat the materials that the planning process produced as ephemera. These documents take a range of forms, including local newspaper articles, letters, meeting minutes/transcripts, memoranda, rezoning applications, subdivision plats, and site plans. Collectively the materials give rise to the corpus of vernacular plans.

Over the ensuing decade, as the plan was implemented, it was substantially modified from the version that had been foretold in the comprehensive plan and approved by the city. This was not the result of a cataclysmic event. It was not because of organized pushback from neighbors, or revelations about environmental damage, or unforeseen changes in the local real estate market. Rather these changes were an accumulation of small tweaks. It was the result of a process that might be likened to erosion. That the changes escaped attention, and the built environment of the city was altered substantially without anyone noticing, is as important as the changes themselves. The slow drip of the Somerset experience reveals the challenges of understanding how communities are actually planned and built.

The paper concludes by considering what vernacular plans can teach us. Somerset reveals a process representative of the bulk of planning projects across North America, in places that have been called “generic local setting[s].” (Parsons and Harris, p264, 2020) Planning emerges from these locales as an ad hoc practice constituted in mundane decisions, where “details overcome theory” (de Certeau, p46, 2002). This case shows (as much as a single case can) how a tacit consensus about urban form has guided planning in the US, a narrative that belies the more exciting but rare stories of conflict and discord under bright city lights.

Citations


Key Words: Vernacular, History, New Urbanism, Development, Implementation

**BEYOND INCLUSION: OPPORTUNITIES FOR REPARATIVE AND REGENERATIVE CIVIC ENGAGEMENT REVEALED THROUGH DENVER’S WEST AREA PLAN**
Abstract ID: 728
Individual Paper

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Central Theme: What does it mean to “plan for inclusiveness” in urban landscapes shaped by social segregation, environmental degradation, and a politics of land often characterized by extraction, exploitation, and
When centuries of divide and conquer strategies have resulted in a politics of trauma reinforced by systems of intersectional and infrastructural oppression, how can we design and host civic engagement processes that support communal healing? As we pursue visions of integral wholeness, how can we account for the processes of repair and regeneration required to advance just, thriving, and resilient communities? How do theories of best practices in public participation such as the IAP2 Spectrum of Public Participation and Arnstein’s Ladder support us in meeting these challenges? What other frameworks for praxis can help us meet these challenges?

Approach: To address these challenging general questions, we explore a rich, mixed-methods case study of engagement processes employed in development of the West Area Plan (2019-2023) led by the City and County of Denver’s (CCD’s) Neighborhood Planning Initiative (NPI) for five neighborhoods in west Denver. Methods include archival, content analysis of recorded public meetings and meeting notes, engagement plans, and collaborative autoethnography from key players, including select city staff and Steering Committee Members.

“Inclusive engagement” is one of three standards required for adoption of neighborhood plans, but CCD increasingly requires that city staff embed equity commitments in the operation of all City departments and engagement processes, in accordance with equity priorities set forth in Comprehensive Plan 2040. NPI staff embraced this challenge. Moving beyond mere inclusion, NPI’s city planners worked to advance inclusive, equitable planning to address environmental justice challenges. Through innovative partnerships and diverse engagement methods, NPI staff designed a process that integrated across four of the five levels of civic engagement recommended by the International Association of Public Participation (i.e., inform, consult, involve, and collaborate) with recommendations to include methods that would “empower” residents in plan implementation. Importantly, staff efforts to “collaborate” with civic players extended to a deep-dive, co-creative engagement process to reconsider the ways the plan could integrate quality of life priorities throughout the plan to address community-identified concerns related to gentrification and climate change.

Meaningful Findings: Upon adoption on March 28, 2023 through a unanimous vote of Denver’s City Council, the West Area Plan (WAP) became the first to explicitly name past inequities (from genocide to redlining) and prioritize strategies to redress past harm, as well as to explicitly center quality of life and equity as the central aim of the plan and each of its sections. The first area plan to include a section focused on water, WAP prioritizes working with nature, including adopting equity and three principles of vitality in living systems (reciprocity, integrity, and liberty) as the core principles to guide planning over the next twenty years.

Relevance: Frequently, planning theory succumbs to process v. outcome debates when it comes to questions of justice, equity, diversity, and inclusion, while often failing to consider inclusion of more-than-human beings as stakeholders. The WAP succeeded in developing an inclusive process with potential to advance environmental justice through concrete policy recommendations. By delving into the complexity of practice in context, the case study reveals (1) nuances through which actions and interactions of public and civic players translated into results and (2) opportunities for planners to assume the role of agents of regenerative systems change at the emergent edge of planning practice.

Citations

The Chinese American philosopher and Detroit-based community activist, Grace Lee Boggs, often called people to reflect on a central question: “What time is it on the clock of the world?” Having been involved in many social movements, Boggs understood the value of paradigm shifting work, and spent her considerable influence calling others in to collectively work toward more just futures (Boggs 2003). In this paper, authors build on research examining the evolution of equity and justice in planning education in response to evolving social values (Gough et al, 202X) to conduct content analyses of planning literature and professional ethics statements over the past 50 years. Drawing from social movement theory, systems change theory, and science and technology studies (STS), this article examines how well the planning profession is evolving in tandem with larger shifts in social values.

Social movement theory tells us that progressive work done in the field of planning can be thought of as resource mobilization (Cress and Snow 1996); or bringing grassroots democratic values, developed through collective action that manifests lived expertise in overcoming social and/or environment injustice, into the public purview and aligning this agenda with the resources it needs to be successful (often via access to financial, political, and/or spatial capital). Systems change theory adds that there are many points of intervention that allow for such collective shifts to become codified into practice (Meadows 2008). Finally, STS tells us that this is especially challenging in the built world, where technological systems can become obdurate once in place, and dominant systems will try to appropriate the trappings of new ones as a form of resistance to major change (Jamison 2001).

Drawing from Donella Meadows’ influential frame for systems thinking, the authors map out the leverage points for systems change that have been animated in the history of the field of planning, examining the collective action/actors animating the social movements and envisioning what next steps might be most impactful to continue bringing the field in sync with the “clock of the world” and closer to the vision Boggs lays out for a climate just future.

Citations

- Boggs, G.L., 2003. These are the times that grow our souls. Animating Democracy Initiative Resource Center.

Key Words: Systems Change Theory, Social Movement, Social Values, Climate Just Futures
CAPITALIST DESERT AND THE ILLUSORY OASIS OF VALUE BASED PLANNING: A REIMAGINING OF JUST PLANNING: A REIMAGINING OF JUST PLANNING THROUGH AN ANTINEOLIBERAL FRAMEWORK

Abstract ID: 809
Individual Paper

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As we seek to change the way that planning is done and the paradigms of planning practice and theory, ideas of how to increase and achieve equity, how to include the voices and perspective of more varied stakeholders, and how to engage more thoroughly with the populations that we are planning for/with come to the fore.

The development of the field of planning is currently centered on both major normative issues of equity, inclusion, and justice as well as larger practical problems that have come to be known as “wicked problems”. In seeking to find ways forward both practically and normatively, paradigms of equitable planning, inclusive planning, participatory planning, and similar have emerged and begun to be cemented as guiding logics of the just planner.

In this paper, I start with a brief overview of the development of planning in this direction and the key themes and guiding logics of these various approaches to planning, before concluding that: current approaches to equitable or inclusive planning are illusory and misguided.

The reason for this bold statement lies in the various ways that planning practice and policy is constrained by a series of neoliberal structures and institutions that set market growth, profit, and capitalist development as the boundary posts that planning cannot venture beyond. Through a critical analysis of the way that “the market” is treated in theoretical planning literature, practical planning literature, enacted policy, and political and economic literature related to planning, my paper will establish how current planning practice is ill suited to do equitable or inclusive work unless this work also advances the needs of neoliberal institutions or engenders market growth.

Following this, I will return to the key theoretical moves made in planning literature which seeks to be equitable or inclusive or emancipatory and note the ways in which it does or, more often, doesn’t critically examine the role of the market in limiting the achievement of the planner’s chosen ends.

Thus far in the paper, I will have laid out the paradigmatic limitations of planning theory and practice due the overriding and overwhelming influence of neoliberal ideology and institutions. In doing this, I achieve the first major aim of my paper: to force planners who seek normatively just ends to reconcile with the ways they either undercut or fail to make significant progress towards their goals by not rebelling against neoliberal capitalist policy and pro-market attitudes.

Following from this, I will work towards the second main aim of my paper, which is to contend an ethical obligation and normative burden of planners to embrace and promote anti-neoliberal plans and policies. This extends naturally from the former point, that if neoliberal institutions limit our achievement of our normative goals, then we have an obligation to push against these institutions. The last major aim of this paper will pick up from here and has two prongs: first, a brief theoretical framework which reimagines planning practice in light of the above findings, and proposes a novel understanding of the role of planner and the epistemic and ontological approaches to planning; second, a series of practical suggestions and opportunities to enact this new theoretical framework for the working planner. In short, this paper seeks to be the first to challenge the viability of justice-oriented planning in light of neoliberal institutions, provide a new theoretical frame to understand planning in a world dominated by neoliberalism, and suggest practical opportunities to adhere to this new frame.

Citations
• Xing Su (2022). Building new cities in the Global South: Neoliberal planning and its adverse consequences, Urban Governance,

Key Words: Justice in Planning, Equity and Inclusion, Planning Theory, Neoliberalism, Planning Ethics

THE PROBLEM WITH ‘WICKED PROBLEMS’

Recent urban planning research has resulted in an understanding of cities as complex adaptive systems (Skrimizea et al., 2019). This perspective view cities as “complex interacting systems” which generate “wicked problems” that resist general planning strategies and make the prediction of outcomes impossible (Goodspeed, 2020; Zellner & Campbell, 2015). Accordingly, Goodspeed (2020) argues that the challenges posed by climate change, technological change, and sustainability goals “requires breaking from past planning approaches” (Goodspeed, 2020, p. viii). The traditional – or rational – planning approach ignores the future’s radical uncertainty, and problematically extends current trends using projections or forecasts. This has led, and continues to lead, to serious planning failures (Goodspeed, 2020).

This argument depends on blaming planning’s failures on the top-down, rational and systems planning that considers cities as closed systems capable of scientific management. Instead, cities understood as open systems should be viewed fundamentally unpredictable, and planning must be a collaborative effort to foster better decisions in the face of uncertainty. The dilemmas posed by the uncertainty of planning for open systems are, of course, what Rittel and Webber (1973) famously called “wicked problems”.

Recently, many planners from this perspective (see Goodspeed 2020; Zellner & Campbell, 2015) have returned to this – seemingly – devastating critique of rational and systems planning. But, today’s rediscovery of wicked problems begs several questions. First, why now? Second, if the line of critique opened up by the discovery of wicked problems is so devastating, why was it not initially more successful in eliminating rational planning as the dominant approach to planning? The very existence of contemporary critiques of rational planning demonstrates that the approach remains entrenched at the top of the planning discipline. If the initial wicked problems critique was not successful to move planning beyond the rational approach, why not? What are the reasons we think it would be now? In other words, have the conditions under which cities are planned changed to make it more or less likely that the wicked problems paradigm will enable the move beyond the rational planning paradigm?

To address these questions, I offer a reassessment of the original “wicked problems” framework. This study grounds Rittel and Webber’s intervention in the historical context from which it emerged, going beyond “Dilemmas in a General Theory of Planning” (1973), to analyze both Rittel’s and Webber’s work leading up to, and following, their seminal publication. Analysis of lesser-known publications reveals both authors deep commitment to cybernetics as a scientific approach to explain the behavior of urban systems. As a result, and against the grain of dominant understandings, I read Rittel and Webber’s famous intervention as a contribution to the rational or systems planning approach. In this sense, Rittel & Webber (1973) elaborates the kinds of insights cybernetics can offer a rational planning which must exercise some form of urban control despite fundamental uncertainty. I
determined that the form of control advocated by both Rittel and Webber involves the substitution of design (especially design of planning process) solutions over state-directed solutions to urban social problems.

Two paradoxes emerge as a result of this reassessment. First, the scope of problems facing cities and society today would seem to demand the kind of large-scale, state-led interventions that the wicked problems framework has discredited. And second, as recent scholarship has demonstrated, this ‘new’ complex systems planning approaches to understanding cities is itself indebted to the scientific insights of cybernetics (Krivý, 2018), an intellectual debt it shares with rational and systems planning. Given these, it is urgent that we critically examine such problematic connections to ‘traditional’, rational planning approaches at the moment of the planning’s supposed break from it.

Citations


Key Words: Rational Planning, Cybernetics, Complex Systems Theory, Wicked Problems

19TH C. WOMEN AND LENDING: AN UNDER-EXAMINED CONTRIBUTION TO SETTLER CITY-BUILDING IN NORTH AMERICA.

Abstract ID: 899
Individual Paper

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This paper highlights the role of women during 19th c and early 20th c. city-building processes in English-speaking North America, focusing on their role in financing urban development. For varied reasons, the lending sector helped influential women of means make a difference in bettering their own lives and those of selected others needing capital. The 19th c. and early 20th c. are of particular interest, given the very significant oppression women faced then. The period also saw many celebrated and utopian-informed planning ideas coalesce.

Given the range of untold planning histories, why focus on middle- and upper-class (mainly) White women who helped finance North American urban development? Yes, they had fewer rights than their male counterparts – but compared with the injustices of slavery and Indigenous residential school systems, their oppression could seem less pronounced. Still, there is value in considering how multiple points the continuum of oppression were implicated in a larger system giving very few options to most people. To this end, my interest in the financing role that select groups of North American women came to play considers its function as one of several more detailed sub-systems encompassed in the larger systems propelling North American urban planning, urban development and colonization, during a critical historic time. For privileged women did play an important, if overlooked, role in those subsystems. Their role is worth exploring critically, for a range of reasons.

First, it is instructive given the women’s own oppression at the time, since this financing role was sought (by those
able to assume it) as a means of overcoming aspects of that oppression. It is revealing both in itself, and in showing how many oppressive historical systems relied on smaller scale and/ or less visible forms of oppression which often became dress rehearsals or laboratories for even deeper and more pronounced injustices directed at others later. Understanding key details and mechanisms behind these less prominent types of oppression—and tactics for overcoming them—could also help us better understand how even larger and more visible forms of oppression—and redress—might also be possible.

Second, the injustices women faced also have propelled several to seek more personal power. Their position often compelled them towards indirect means—means which would have seemed more accessible at the time, since they seemed to produce less resistance. Unfortunately, such means also could and did involve participating in, or at least gaining from, the oppression of others. Consequently, the activity of these privileged but still oppressed and potentially oppressive groups can help us better understand the importance of preventing oppression at multiple levels. It also reveals the complex tactics and alliance-building, or enrolment work, which allow oppressive systems to function.

The paper will first summarize non-planning research which actively examines women’s activity in mortgage lending during the 19th c. Next, It will highlight a mini-case study: that of Joan Dunsmuir, wife of Scottish-Canadian coal baron, Robert Dunsmuir. Joan’s case suggests an especially compelling example of someone seeking power through paths of least resistance, with both empowering and problematic results. It will then consider this material from a planning history and theory perspective, comparing and contrasting it with the erasure of property rights for Indigenous peoples, and also examining it through the lens of various types of socio-technical systems (STS) constructs, including assemblages; black boxes used to stabilize particular arrangements; and points of passage. Finally, it will propose next steps and recommendations for future research to support anti-oppressive planning approaches.

Citations


Key Words: women and planning history, gender and city-building, finance and planning history

INCORPORATING YOUTH-LED MOVEMENTS INTO CLIMATE JUSTICE PLANNING: A CONCEPTUAL FRAMEWORK
Abstract ID: 917
Individual Paper

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Climate change is endangering the sustainability of the planet and amplifying social, economic, and environmental inequality among communities and nations (Hamman et al., 2018; IPCC, 2014). Given that young people today will face the brunt of climate change as they reach adulthood in 10-20 years (IPCC, 2018), their active participation and
investment in this issue is unsurprising. The 2019 youth climate strikes during the United Nations Climate Summit in NYC inspired one of the world’s largest protests with 7.6 million people participating (globalclimatestrike.net; Hauck, 2019).

Although the youth climate movement has gained wide public attention, particularly highlighting Greta Thunberg’s work, little scholarship has focused on the implications of youth participation in climate change planning across cities. Inspired by youth participation in improving urban life, this paper develops a conceptual framework for understanding the process and implications of youth-led mobilization, centering young people as critical social agents in the climate movement. Planning and policy continue to overlook young people as active participants and stakeholders (Checkoway, 1998; Knowles-Yáñez, 2005), with adults planning cities for rather than with young people. Moreover, the planning profession currently lacks the tools to understand, analyze, and meaningfully incorporate the demands and visions of youth (e.g., Stafford & Claudia, 2018).

We argue that in order for planning to effectively respond to climate change necessitates an understanding and incorporation of youth-centered demands taking place in current climate movements. Whereas planning and policy tend to be reactive professions with bifurcated approaches (Gleye, 2014), the climate justice movement necessitates a forward thinking and proactive approach, as envisioned and executed by youth-led collective action. Despite their limited legal rights (Liebel, 2008) and access to policy making (Frank, 2006), young people are demanding a seat at the table to transform society toward a more just future (Fisher, 2019; O’Brien et al., 2018). Through a nuanced critique of the impacts of climate change, youth climate activists are initiating protests and mobilizing the public to advocate for change by centering issues of race, gender, class, and coloniality. They are motivated by a variety of factors including a sense of responsibility, elevated fear given visible changes to the environment (Fisher 2016) and a strong commitment to nature and social justice issues (Pearse et. al, 2010). Youth-led direct action is embedded in both physical and online spaces, appearing in protests, campaigns, organization formation, and litigation (Borunda, 2019; Parker, 2019; Thompson, 2019).

In this article, we review and synthesize youth-centered social movement literature and youth studies literature to develop a framework for understanding the process and implications of a youth-led climate movement on city planning. Social movement research seeks to understand how groups mobilize and why movements emerge (Walder, 2009). Social movement literature illuminates the origins, growth, decline, and outcomes of movements as well as the political contexts and dynamics which affect movement building (Della Porta & Diani, 2020; Goodwin & Jasper, 2004; Maher & Earl, 2018). On the other hand, youth studies literature demonstrates the ways in which young people use the city and related physical and virtual platforms to collectively protest and envision alternative futures (Rodgers, 2020). Youth studies scholars have documented how the collective ideas and visions of youth translate into action in the city by taking over public space, attending policy meetings, and drafting policy solutions (e.g., Iwilade, 2012; Li, 2020). The framework developed in this article draws from both literatures to outline how planners might conceptualize the relationship between how young people understand the climate crisis (discourse); how they are protesting and collaborating with each other (tools; spaces); what they are asking for (policy; planning); and what they envision for their future (imaginaries).

Citations

SHOULD PLANNERS RECLAIM AND REHABILITATE THE IDEA OF PUBLIC “PROGRESS” AS A WORTHY ASPIRATION IN AN ERA OF PRIVATIZED INNOVATION, ENVIRONMENTAL LIMITS TO GROWTH AND THREATS TO DEMOCRACY?

Abstract ID: 921
Individual Paper

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This paper examines the rise and fall of the language of “progress” in urban planning. Planning scholars are ambivalent, overtly dismissing progress as an antiquated faith and yet remaining tacit believers. Promoting progress (constructing a vision of a better future) is arguably the planning profession’s stock in trade, and the rejection of progress is the rejection of planning itself. Despite prolonged criticism of its misguided hubris and alliance with modernist, technocratic rationality, the vocabulary and imagery of progress endure and shape the politics of government, technology and urbanization. We ignore progress at our peril.

This is not simply an empirical question (does history provide evidence that living conditions have improved over time?), or a speculative question (can things get better?), but a teleological and ideological question (how do public and private interests employ progress to define the values and purposes of urban society?) To command the language of progress is to control the narrative of urban change and who has a right to the city’s future.

This paper explores three questions. First, what is the intellectual history of progress amongst planners? Second, what is gained and what is lost with the rejection of progress? Third, should we reinvigorate the aspiration of progress in planning, and if so, how? I conclude by arguing for a critical rehabilitation of progress: an idea that is still the unspoken core of much planning ideology. Continued reactive opposition to progress merely puts planning on the defensive, allowing opponents of planning to redefine progress in narrow terms and rhetorically use it in their attacks on planning.

Planning’s distancing from progress has created a political vacuum: progressives have largely abandoned the powerful symbolism of progress to conservatives who are more than willing to embrace the rhetoric to advocate economic progress and yet oppose broader, socially progressive agendas. Ironically, it is apparently no longer “progressive” to believe in progress. The result is a societal shift from a commitment to universal progress (common access to public services, public spaces, great public works) to an increasingly privatized vision of progress — from “collective sacrifice, collective gain” (with Progressive Era/New Deal legacies) to an era of the individual tech entrepreneur as the savior of cities. The rhetoric of private innovation replaces public progress. Privatized corporatism, masquerading cities as “self-organized complex systems” not needing conscious regulation (e.g., Bertaud, Glaeser), appropriates and redefines “progress” as innovative, non-planned emergence. The paradoxical result is that planning’s public-minded vision of progress gets attacked from both the left and the right.

I critique the simplistic lifecycle narrative of progress’s rise and fall: Enlightenment origins; acceleration through the urban-industrial revolution; institutionalization (Progressive Era, New Deal); over-ambition and hubris (high Modernism, urban renewal); crisis and doubt (deindustrialization, “Urban Crisis,” postmodernism); and finally rejection (climate crisis, decolonization, degrowth). Progress is conflated with Modernism and dismissed as the cynical propaganda of globalization and the capitalist growth machine. Or progress becomes a zero-sum game: each productive step forward contains within it a destructive step backwards.

Reclaiming progress, even if done critically and with contemporary eco-social values, is not without risks. Its dual Schumpeterian logic of creative improvement and destructive displacement invariably creates conflict. Reengaging progress leads to a confrontation with the central tension between two fundamental planning impulses: dynamic growth and expansion versus community preservation and environmental sustainability. As long as we equate progress with just one (growth) side of this debate, then we won’t be able to
reconcile progress and sustainability (and the common reaction is then to reject progress). To work at the collision of these two forces is to productively work at the core of urbanization politics.

Citations


Key Words: planning history, planning theory, ideology of progress, sustainability, innovation

PERFORMING PUBLIC PARTICIPATION: MOVING BEYOND CRISIS TOWARDS NEW RESEARCH DIRECTIONS

Is participatory planning in crisis (Legacy 2017; Monno & Khakee, 2012)? Patsy Healey in her article “Planning Through Debate” described the virtue of participation as the possibility of “making sense together, while living differently” through which “a democratic form of planning” could be realized (Healey, 1992, p. 144). Thirty years later, Healey’s words remain deeply relevant as our cities and its people contend with the vexed issues of climate change and social injustice, against a backdrop of growing conflict. However, with the foreclosure of the political to a perpetuation of inequality and marginality, it seems that participatory planning – with all its celebrated virtues – is languishing. At last year’s ACSP Conference in Toronto, a group of 24 scholars came together through four pre-organized sessions and a post-conference workshop to reinvigorate a critical research agenda for participatory planning by considering both this sense of crisis and the celebrated virtues of participation. The sessions, organized under the banner of “Performing Public Participation”, asked whether participatory planning was performing the way it was intended or had become performative.

In preparation for those sessions, we reviewed recent scholarship on participatory planning (including works authored by the workshop participants) to help frame an opening provocation on the perceived crisis in participatory planning and the opportunities for moving beyond it. While gathered in Toronto, the workshop participants considered the provocation and generated ideas for new research directions. If there is a crisis, we collectively lamented, it is manifesting from an over-commitment to the formal spaces of participation in western, neoliberal, settler-colonial states where capital prevails and counter-hegemonic practices remain concealed. For the workshop participants, our ability to move beyond this sense of crisis rests in our ability to reconnect with a more radical form of participation that centers care and nurtures interconnectivity between people and place. These observations also have implications for how we do our work as scholars of participatory planning. In the first instance, sharing among scholars in this way is a radical practice in itself. From this place of sharing, we began to critically analyze how participatory planning is performing and together generate new knowledges of how participatory planning can be performed, be they formal, informal and otherwise, and that our work is to be open, and critically engaging with, the emerging politics and theories these different scholarships and pedagogies hold.
As scholars and educators of participatory planning, we heed this call to action. Our paper reports on and extends the results of last year’s workshop by considering the implications for participatory planning theory. Grounded in decades of research that celebrates participatory planning’s potential to serve communities, on one hand, and lamenting how it can perpetuate inequality on the other, we explore what might be described as the participatory planning paradox. We examine how the procedural rules and institutionalized practices of participation can be mobilized to sideline, at best, and erode, at worst, the most political dimensions of urban life, narrowing the space of what counts as participation. The paradoxical ways in which participation can be both progressive and oppressive will continue to deepen as new technology platforms and artificial intelligence alter the ways of performing participation within the neoliberal and post-political cities, eroding the very virtues Healey described. Thus, to generate a new performativity for participatory planning—one that is aware of its context, is intentional in its service to communities, and can help planners plan cities—requires that scholars and educators alike engage in new methodologies and pedagogies that invite us to undertake our research and teaching practice with intentional transformative effect.

Citations


Key Words: public participation, crisis, paradox, formal participation, radical participation

INTEGRITY AND INTELLIGIBILITY: CHALLENGES OF ELINOR OSTROM’S THEORY OF COMMON POOL RESOURCES FOR URBAN PLANNING

Abstract ID: 939

Urban land use planning operates in market-based economies in which urban land is divided into parcels, most of which are privately controlled and are subject to owners’ (appropriators’) control. Impermeable surfaces, building capacity to hold occupants, garaging of automobiles, and building form are all subject to appropriators’ self-interested decisions. Elinor Ostrom’s Nobel Prize winning work on common pool resources (CPRs) has broad implications for urban land use planning because it elaborates on mainstream market-failure theory: she gives wide scope and clearly expressible logic for recognizing situations requiring intervention to protect a shared terrestrial resource. Her work does so through the concept of subtractability: land appropriators’ individual decisions—for example about water flows over land parcels—can have deleterious subtractive effects on the common pool resource, namely regional hydrological process. However, there are limitations to her work’s direct applicability. First, she and her followers concentrated on simple examples of isolated CPRs such as fisheries and irrigation systems, raising doubts about applicability to complex multi-functional resources like urban land. Second, much of the work lacks clear distinction between subtractibility in which (A) the aggregate (fish in a fishery, grass in a pasture) resource is subject to depletion and (B) an integral resource that is subject to systemic deterioration. For example, a wildlife habitat or land use density-to-transportation relationship have—this paper argues—integral resource features. If the resource is thought of as aggregative, then it appears to be intelligible, so intervenors can focus on modes of institutional governance. If the resource is understood as integrative, then its internal systemic features have to be studied; comprehension and analysis must precede investment, incentive, or regulation; in Patrick Geddes old dictum, survey must precede plan. When made clearer, Ostrom’s conception of CPR’s holds out hope for a powerful, substantive theory of urban physical planning.
DEATH BY LAW: HOMELESS ENCAMPMENTS, RECONCILIATION, AND PLANNING TORONTO PARKS

Abstract ID: 941
Individual Paper

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According to mainstream planning theory, urban parks serve many important functions: they enhance urban ecosystems and provide social and psychological benefits to urban dwellers. Critical geographers show how urban parks are also highly regulated spaces, subject to variety of urban norms and legal technologies that criminalize specific park users and uses (Walby and Lippert, 2012). This paper will examine the conflicting and contradictory nature of park management in Toronto, focusing on how the City of Toronto has managed and banished homeless encampments from parks while also envisioning parks as a site of reconciliation.

In 2022, the City of Toronto announced that it would open designated sites in Toronto parks for Indigenous peoples to hold sacred fire ceremonies, thereby making good on one of the commitments in the City of Toronto Reconciliation Action Plan. This announcement was made on the heels of a violent police operation designed to clear Toronto parks of homeless encampments. Citing City by-laws, those living in parks were charged with trespass. These encampments include many Indigenous peoples: 35% of Indigenous adults in Toronto are experiencing homelessness and make up about 15% of the unhoused population (City of Toronto 2021, 17).

In this presentation, I will examine how policies relating to park planning and management in Toronto reflecting an extractive and managerial approach to park spaces based on understanding parks as a form of property, thereby reinforcing racial hierarchies and inequalities. Finally, I will consider Indigenous legal orders can help to re-frame understandings of human-environmental relations that emphasize relationality rather than exclusion (Dorries, 2022).

Citations


Key Words: homelessness, property, planning law, indigenous planning, justice
A THEORETICAL FRAMEWORK FOR CREATING NOURISHING INDIGENOUS LIVING IN URBAN ENVIRONMENTS
Abstract ID: 1016
Individual Paper

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In the paper, the conceptual umbrella for an Indigenous urban research programme is articulated and explained. Indigenous planning theories and research philosophies sit at the heart, ensuring that Indigenous knowledges and practices are upheld and validated throughout all aspects and stages of the research. The conceptual foundation is based on collaborative, respectful, ethical and empowering Indigenous aspirations. There is a decolonising and transformative intent that is power-critical and optimistic in terms of cultural reclaim and realisation of Indigenous aspirations (Smith 2012). The theoretical foundation places Indigenous community authority at the core of the research, with both the research directions and practices being determined through ongoing partnership with Indigenous communities.

The conceptual underpinning for the research programme is summarised in a braided interconnection of the key elements (best shown diagrammatically). The interwoven threads of the framework clarify the values and relationships that are a priority in seeking to achieve sustainable urban living for diverse Indigenous communities in the Aotearoa New Zealand setting. Self-determination is the overriding concept that underlines the entire framework. There are then seven principal foundations emerging vertically from there, situating the research within the Māori worldview, and upholding the cornerstones of ancestry, history in place, identity, values, practices and spirituality. Interwoven throughout the research, are the horizontal spheres of collaboration and connection, local leadership and elder input, mentoring and modelling, stewardship and guardianship of our environment, our language and communication of priorities, and embeddedness and integration in place. By keeping this conceptual framework at the forefront of the research programme, there is a strong plaited fabric that has focussed our endeavours and offered a pathway for future research in the Indigenous planning arena.

By way of background, it is important to understand that Māori-driven sustainability efforts in urban settings aim to promote Māori identity and address environmental concerns. For Māori communities, the built environment is not simply about physical places; it is an expression and extension of identity, inseparable from ancestors, events, practices and context (Thompson-Fawcett & Riddle, 2017).

To be well for Māori is related to land, cultural identity and belonging (Olin et al., 2022), however there has been little research connecting, first, the impacts on Māori wellbeing when alienated from ancestral land in an urban setting and, second, Māori urban development practices. The results of this research programme can now inform and contribute to the implementation of fresh urban futures for a spectrum of Māori communities, from those who live within tribal locations, to those who retain strong tribal connections but live beyond tribal boundaries, and those who have limited or no current tribal connection. The research demonstrates the importance of kin and place-based communities and their cultural and environmental sustainability in a provocative alternative placemaking effort that will challenge the dominant conventional housing and urban development approaches in Aotearoa New Zealand as well as the theoretical foundations for Indigenous urban planning more broadly.

Citations

FUTURE JUSTICE: ROOTING PLANNING IN PRESENT DAY INEQUITY
Abstract ID: 1081
Individual Paper
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Futures planning is a core part of planning’s identity, and part of what distinguishes our practice from others (Meyers 1997). Whether utopian or dystopian; plausible or preferred planners have envisioned futures through a range of approaches. Early plans might be described as charting a path for a ship, fighting to get to where we want to be no matter the currents or storms. In recent years, planning practice has focused on what is plausible or likely. Here the role of the planner is to prepare for some or many likely futures, creating processes that anticipate what may happen (Quay 2010; Hopkins & Zapata 2007). Here, planners are less like adventurous ship captains, and more like canoers, paddling through a river while responding to its flow even if you end up at a new destination (Hopkins 2001).

Social justice goals are often brought up as one of several considerations to consider when making future plans and preparations. Justice and equity, especially racial, are not well conceptualized in these various approaches to futures planning. I ask: what would futures planning look like if the dominant concern, the major goal of planning, was to create just futures for people of color? I argue that regardless of the approach - visionary chart making or anticipatory plans - planning does not effectively engage or consider inequity as a foundational part of the past and present. This results in plans, policies, and projects that prove limited in fomenting significant change for people who have been and are marginalized.

A better understanding of futures planning would instead be rooted in the lives of people who have had less than, rooted permanently in our places, and conceived of as an act of nurture, support, and love. Such an approach to planning would counter several dominant assumptions in contemporary futures planning. First, futures are not unpredictable. For historically marginalized people the future is predictable. Without major structural changes they will continue to experience oppression. Second, ending inequities requires bold changes. We cannot merely prepare for storms or adapt to currents. Third, planners are not the leaders for these changes, rather they are supporters, researchers, organizers, etc. Fourth, the foresight about communities and how to make change happen comes from our communities most likely to lose out from present day planning. And, fifth, justice must serve as the starting point for planning and plans.

To ground this conversation I draw on my experiences as a futures planning scholar, and the director of a homelessness research center. Long range planning considers the future broadly, drawing together complex and interconnected issues. Addressing and preventing homelessness focuses on present-day emergency conditions connected to one fundamental issue - housing.

Despite planning’s own focus, especially via community development, on housing, planners have largely been silent about homelessness. How does this happen? The juxtaposition between land use planning and homelessness reveals how planning’s lack of connection to injustice results in its disconnection from significant issues. A planning approach rooted in historic inequity would have foreseen homelessness, and been part of the prevention of it and its resolution.

Citations

Los Angeles’s regional growth has been mediated by the relationships between property development and white supremacy. Studies of Black Los Angeles illuminate these dynamics but mainly attend to the legacies of exclusionary segregationist practices—both de jure and de facto—paying less significant attention to processes of dispossession, particularly in the production of and reconfiguration of the city’s black spaces. While racial segregation certainly persists in the region, what was once considered historically black space in Los Angeles has been less legible as such as the black population has declined and dispersed throughout the larger region. Emblematic of this overarching transformation is that in Watts: while the neighborhood was 90 percent black in 1965, it was just 23 percent black by 2020.

This paper is concerned with the role of planning processes in these transformations of black space. Reading redevelopment processes through the lens of racial regime of property, the study considers how such processes are deployed to mediate property relations, race, and space. As the concept of racial regimes highlights the instability of seemingly concrete power relations, this study lifts up black rebellion as a means through which redevelopment processes and their commitments to upholding racial regimes of property are contested and negotiated.

Deploying a conjunctural analysis, the paper tracks the reproduction and deconstruction of Watts as a black space in Los Angeles, illustrating the ways in which the transformation of racial regimes of property is an articulation of temporal, spatial, and multi-scalar processes and contingencies. Examining the role of a spectrum of institutional actors to show how they navigate power relations, the study engages in archival research examining policy and planning documents, popular media, oral histories, and the records of community organizations. Ultimately, this project aims to broaden our understanding of postwar Black Los Angeles and shed light on the planning processes that have and continue to shape it.

Citations


Key Words: redevelopment, black geographies, property, planning history
EXPLORING THE ROLE OF TIME IN COLLECTIVE SALES AND LAND ASSEMBLIES

Abstract ID: 1114
Individual Paper

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This paper explores the role of time in shaping the experiences and outcomes of collective sales processes (aka land assemblies) in Sydney, Australia and Vancouver, Canada. Drawing on the findings of a three-year research study funded by the Australian Research Council, the paper identifies the key temporal aspects of the collective sales process whereby neighbours in upzoned areas come together to sell their properties to a developer ‘in one line’, thus reassembling land in order to enable high density redevelopment.

While being able to participate in a collective sale is often framed as ‘winning the lottery’ and can earn owners significantly more than their property is worth on its own, it is also clear that these processes require a significant investment of time and effort by participants, without any guarantee of success. Indeed, the research findings suggest that the time taken to negotiate and settle collective sales increases the risk of failure, as market conditions shift and deals become unviable. In the meantime, however, neighbourhoods are often left suspended in limbo while these negotiations play out, with little incentive for owners or governments to invest in property improvements or maintenance. At the same time, the time taken to conclude negotiations may frustrate the interests of planners, as their strategic planning aspirations are delayed by private negotiations over which they have little control. All of these findings point to time being a key factor in shaping the success of collective sales and the impact of collective sales processes on neighbourhoods.

Bringing together insights from stakeholder and resident interviews, a detailed review of planning processes in rezoned neighbourhoods, site visits and photography, this presentation will highlight a range of ways in which time shapes the experiences and outcomes of collective sales processes and subsequent high-density redevelopment, including:

- How long collective sales take and the time commitment needed from participants to negotiate collective sales;
- How participants weighed up the costs and benefits of time versus money in negotiating a collective sale;
- The impact of time taken to finalise collective sales on the viability of those sales;
- The impact of legislated timeframes on the experience and success of collective sales in strata (condominium);
- How collective sales impact on planned neighbourhood redevelopment timelines; and
- How the time taken to negotiate collective sales impact the social and physical characteristics of rezoned neighbourhoods ‘in the meantime’. In doing so, the presentation offers a contribution towards a growing literature that focuses on the ‘temporalities of redevelopment’ (Lanari 2019, 365) and brings attention to how time shapes both the experiences and outcomes of urban planning and urban change (May & Thrift 2003; Raco et al. 2008; Zhelnina 2022). Understanding the role of time in collective sales experiences and outcomes is important both for the practicing planners working in areas where these sales are taking place, but also for planning theory, which as Laurian and Inch (2019, 281) argue, has only just begun to explore “how paying attention to multiple temporalities might shape debate about the possibilities and conditions for planned change”.

Citations

THE CITY MUSEUM AS A CRITICAL SPACE FOR PLANNING HISTORY

Abstract ID: 1159
Individual Paper

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This research revisits the debates around the role of museums – particularly city museums – in the context of local (municipal) planning practices and the production of historical knowledge about planning and cities (Grewcock 2006; Calabi 2009, 2012; and Tewdwr-Jones, Mark, Dhruv Sookhoo & Robert Freestone 2020).

What opportunities do City Museums offer for the reconsideration of planning pasts, present, and futures? Grewcock (2006) argues that museums should explore the convergence of local history with urban planning and place-making. City Museums and exhibitions have a long history within the origins of modern City Planning Profession (Tewdr-Jones, Sookhoo and Freestone 2020).

This research explores the questions raised in the existing literature through the lens of a case study focused on the Kansas City Museum. City Museums – as much as they are spaces for building, promoting and interrogating historical narratives – provide a different context for public and student interaction with past episodes of planning and public policy. This paper explores the venue of the City Museum as a place where academic, institutional and community histories of planning can come together – in contrast, in conflict, or in coexistence.

How is planning history lived? Beyond the insulated halls of academic planning programs and library archives – there are different dimensions of planning history. Some of these versions of the history of planning exist within the lived experience of individuals and communities impacted by plans and planning decisions. The lived histories of planning are too often left outside of academic analysis, as well as the collections of local museums. Planning decisions, plans and planning processes are experienced by those outside of academia or city hall from different perspectives.

Based on a case study of the work of the Kansas City Museum (KCM), including participant observation of the renovation and re-design of the museum’s exhibitions – this paper shares the challenges of working in the space of the museum as a way to explore local planning history and the politics of neighborhood planning.

Beyond the general mission to present the municipal and metropolitan history of Kansas City, the paper explores the ways in which the KCM has partnered with a variety of artists, community organizations, local historians, neighborhood leaders, and others to develop alternative views of the city’s history. Within the case study, the paper presents the challenge and opportunity of the neighborhood gallery – a space in which local neighborhood histories are featured. Through a partnership with the UMKC Center for Neighborhoods and local neighborhood organizations – the KCM demonstrates the challenges of the city museum as a more engaged actor in local
planning processes.

Citations

- Calabi, Donatella (2009) Memory, narrative and display – city museums in recent initiatives and debates, Planning Perspectives, 24:3, 385-390, DOI: 10.1080/02665430902934034
- Tewdwr-Jones, Mark, Dhruv Sookhoo & Robert Freestone (2020) From Geddes’ city museum to Farrell’s urban room: past, present, and future at the Newcastle City Futures exhibition, Planning Perspectives, 35:2, 277-297, DOI: 10.1080/02665433.2019.1570475

Key Words: City Museums, Neighborhoods, Restorative Justice, Planning History, Placemaking

ACCOUNTABILITY FOR URBAN-PLANNED OBsolescence: DISCARD STUDIES FOR PLANNERS

Abstract ID: 1178

Individual Paper

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Despite what some have described as progress on climate change, we are still dangerously close to irreversible planetary damage. Youth, frontline community, and scientist-led movements are pushing for broad societal transformation that not only reduces our society’s reliance on fossil fuels, but also transforms the extractive foundations of the global economy, elevating economic and political empowerment and reducing the crippling inequality that increasingly characterizes the economy at all scales.

Planning has long straddled radical intention and pragmatic action (Sandercock 2022). But planning is now, unquestionably, at an inflection point. Past pragmatic compromises, like sustainability and resilience, have so far failed to mitigate inequality or climate risk (Anguelovski et al. 2016; Meerow, Pajouhesh, and Miller 2019). The best solution we have identified, the Green New Deal, seems in urban practice to advocate for technological substitution by advocating for electrification and its associated green jobs (see for example, the Green New Deal for Los Angeles, 2019). If implemented, such plans imply a shift in practices of extraction away from fossil fuels and towards other substances—lithium, copper, cobalt, and nickel, among many others that are necessary inputs for batteries and solar panels. This shift contorts, but does not unmake, global landscapes of inequality and ecological damage (Riofrancos 2023). At the same time planners have yet to consider fully how to manage the damaging outputs from these new extractions, let alone how and where to manage spent solar panels, wind turbines, and electric car batteries. While a “green” energy transition may slow global climate change, it offers little—structurally, in the long term—to assure greater economic and political equity, or a reduced reliance on colonial strategies of extraction.

In this paper, we contend that discard studies—an interdisciplinary field that studies systems of wasting in all forms, and at all scales (Liboiron and Lepawsky 2022)—can help planners to identify truly transformative and reparative solutions by linking extraction and discard to local development decisions. While recognizing that tradeoffs are unavoidable and that no system is free from waste, discard studies invites us to consider the full
spectrum of activities necessary to support a transition to a green economy, including sticky questions of consumption, pollution, and colonial extraction.

Planning does have some tools already for accounting for particular discards from economic activity. Urban metabolism and lifecycle analysis offer ways to track energy and material inputs and outputs. But these accounting strategies strip questions of power and violence from the highly political extractive processes that feed urbanization. Discard studies does not provide specific accounting tools, but rather strategies for attending to both the material specifics and power. It offers up questions about where things come from, and where they go, and what happens along the way, that, if we were to answer them, might yield radically different proposals for urban development.

To illustrate the usefulness of discard studies for planning, this paper first revisits the history urban renewal, recasting clearance as a process of discard. This history provides a set of concepts relating to discard, extraction, and consumption, that we then apply to several recent urban plans and large scale development proposals from New York City.

Citations


Key Words: Planning Theory, Discard Studies, Accountability, Waste, Inequality

THE PROMISE AND THE MESS: PLANNING WITH DIGITAL TECHNOLOGIES

Abstract ID: 1219
Individual Paper

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This paper examines the role of digitality in city planning. It claims that digital technologies are vehicles for articulating collective aspirations, and are agents of particular and concrete action in the city. In this, I argue, digital technologies resemble planning. To understand this relationship, the paper advances the framing of the promise and the mess, a theoretical bifocal capable of seeing both imagined ideals and situated practices. The promise is a statement of values that offers an abstracted transcendence in which constraints and contradictions are smoothed over. The mess is what actually happens in conditions of social and material uncertainty. I build this framing with theorizations of affect and technologies from a range of literatures (Berlant, 2011; Mosco, 2004). Recent research on digital technologies tends to focus on either its promises or its messiness, and in so doing risks either overlooking its politics or overstating its power. I offer planning theories and practices as productive in bringing these technological lenses together.

The argument draws from an empirical study of transportation planners’ work with emerging apps and data
exchanges for urban mobility. In recent years, this field has seen a flurry of experimentation and new practices related to transportation service models, data specifications, and mode integration. Sometimes referred to as “new mobility,” this case offers an illustration of the coming together the paradigms of digital technologies and planning practice, one example of what has been called “platform urbanism” (Barns, 2020). It also offers a research site that combines idealized promises and messy practice.

I draw two conclusions from this case that are applicable to planning generally, beyond its specific engagements with emerging technologies. The first is to recognize the utility of the promise—whether found within a city plan or a piece of software—as a site for wrestling with politics, rather than transcending them. Planning has long understood its practice to be laden with values and power, but too often fails to see the same politics inscribed in new tools. The second is to emphasize the need to live well with the inevitable messiness of the city, rather than taking refuge in a hope for greater certainty and control of the city to come. I focus especially on the agency of social actors and the materiality of the built environment as sources of frustration for many of planning’s visions that should be seen instead as resources for creating better cities. My attention to the mess builds on planning theories of immanence and uncertainty (Beauregard, 2021; Hillier, 2005). More broadly, the paper offers an empirically grounded theorization of digitality that is increasingly needed in planning.

Citations


Key Words: smart cities, platform urbanism, new mobility, digitality, visions

FROM GEORGE TO ALONSO: A GENEALOGY OF LAND VALUE IN NEOCLASSICAL ECONOMICS

Abstract ID: 1270
Individual Paper

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The unique properties of land are the bread and butter of planning, but continues to pose intractable challenges to the discipline of economics. Land’s status as what Polanyi called a “fictitious commodity” presents neoclassical economics with irresolvable tensions due to its uniqueness and fixity in space and in supply. The nature of its value and ownership has been a recurring question since the origins of the discipline, from Locke’s labor theory of value to Ricardo’s notion of marginal rent. Many contemporary approaches to land value continue to be rooted in different interpretations of the labor theory of value, particularly those in the Marxist tradition. There is far less research on the neoclassical development of land economics in the neoclassicist’s own terms, with some exceptions (Haila, 2015). The absence is not confined to planning alone, but even more profound within economics: in their book Rethinking the Economics of Land and Housing, Ryan-Collins, Lloyd and Macfarlane dedicate their book to students and academics in “economics, where the topic of land has almost completely disappeared from most textbooks” (2017, p. 25).

This paper develops a general framework for tracing how land value came to be understood in neoclassical economics. Within this broad project, I will focus on charting the continuities and differences between two significant thinkers: Henry George and William Alonso. The selection of these two thinkers has to do with their
importance for the understanding of land value. Henry George (1839–1897) was a political economist and journalist whose writings were immensely influential in the framing of land value as unearned income that is collectively produced, and which sparked the “single-tax” movement. William Alonso (1933–1999) was an economist and planner whose theory of bid-rent as a form of understanding land prices and locational economies continues to be the prevalent model taught in urban economics courses.

The centrality of these two thinkers, however, does not fully account for the reason for why they should be compared. In fact, some substantial differences in their economic formation and the moment of the discipline in which they were writing seems to suggest the opposite. However, it is precisely because of these differences that understanding the relationship and divergence vis-à-vis the marginalist economics of these two authors can be so constructive. The paper will look at how these two economists craft land value as an economic object, and how that relates to advances in marginalist neoclassical economics. Rather than depart from a particular definition of land value and rent, I will trace the emergence and definition of these terms as they encounter the challenges of attributing price and/or value to land, when its properties challenge conventional market mechanisms for reaching an optimum equilibrium. From George’s adoption of Ricardian differential rent theories (1924) – considered by Brue & Grant 2013, Stratford, 2022 and others to be an early manifestation of marginalist frameworks, to Alonso’s bid-rent model (1964), I will trace how marginalist logics emerged, not despite land’s challenges, but in response to them.

Although the genealogy will allow me to trace the evolution of marginalist approaches around land value from George to Alonso, it also enables the understanding of the political dimensions of such a conceptualization, which are less explicit in the bid-rent model than in Georgist conceptions of land value. In the concluding sections, I will begin to chart how such theories translate into a philosophy of political economy – how this vision of land value connects to visions of political governmentality and claims to the “public” nature of land.

Citations


Key Words: land value, Urban economics, publics, genealogy

USING NETWORK THEORY TO UNDERSTAND BROADBAND INFRASTRUCTURE NETWORKS AS SOCIOTECHNICAL ARTEFACTS
Abstract ID: 1286
Individual Paper

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Scholars have noted the potential contribution of Science and Technology Studies (STS) to planning, including key concepts from Large Technical Systems, Assemblage thinking and Actor-Network Theory (Beauregard 2015, Farias and Blok 2016, Van Wezemael 2018), inviting us to reconceive the city as a system, network or assemblage formed by heterogeneous actors and relationships in constant flux. Similarly, research in spatial economy theory sheds light on how infrastructural changes, and their effects on the physical landscape, is driven by the overall pursuit of perfect mobility of capital, individuals, and resources. In this paper, I explore some key theoretical concepts
relevant to the study of public infrastructure networks and their impact on urban landscapes, and I discuss how these concepts can be used by planners to study the spatial implications of the digital divide, using a case study of a location recipient of state broadband funding to develop. I will use key concepts from network theory to analyze planning process behind the development of broadband networks, explore the incentives of entry, barriers, opportunities, and impact of broadband networks.

The history of broadband policy and expansion has been compared to electricity and the telephone (Ali 2020), both of which began as non-essential services for a privileged few and grew into “public infrastructure” – ubiquitous, universally accessible, and affordable. Broadband networks contribute to the circulation of communications, capital, and resources by easing the barriers of time and space. However, disparities connected to socioeconomic status and remoteness emerge and produce geographies of broadband inequality. Drawing from various theory currents (LTS, Assemblage Theory, ANT and Network Urbanism), this paper will draw a connection between key concepts network theory and broadband policy to illustrate the impact of multiple drivers and barriers (socioeconomic variables, geographical, economic, and regulatory) on entry, expansion and upgrading for broadband infrastructure networks.

To this purpose, I will use a series of diagrams highlighting key theoretical concepts and discuss how they relate to different aspects of the problem. First, I review 1) the literature studying infrastructure networks as sociotechnical artefacts - which, though often conceived as permanent and immobile, are in fact products of specific historical circumstances and undergo a maturity process through their lifetime (Graham and Marvin 2001), and 2) the literature exploring the commodification of public infrastructure networks and its implications. A shift from integrated planning to privatization of public infrastructure networks has led to an “unbundling”, fragmentation and customization driven by capital maximization, which in turn contributes to uneven spatial development and disparities in access to what we once defined as “public” services.

The purpose of this paper is to outline key theoretical concepts from STS that contribute to an understanding of infrastructural changes and their implications for the urban fabric and urban governance, oriented towards a planning audience. Infrastructural changes are part of the development process of networks, and largely driven by the pursuit of unobstructed mobility of capital, individuals, and services. STS theories and spatial political economy invites us to look at the various dynamics that shape and transform infrastructure – which, in the case of broadband, include emergence of newer technologies, geographical and environmental factors, market dynamics, intergovernmental relations, among others.

Citations


Key Words: planning theory, science and technology studies, large technical systems, public infrastructure networks, digital divide

APPLYING RESILIENCE THINKING FOR COMPLEX ADAPTIVE SYSTEMS TO POLICY AND PLANNING
Abstract ID: 1358
Individual Paper
In this integrative review, we present a conceptual framework developed from our synthesis of the body of literature on resilience theory as developed for the study of Complex Adaptive Systems (CASs). We discuss two cases illustrating its application to planning and policy.

Case 1. Learning from pandemics: applying resilience theory to identify priorities for policy and planning (published July 2021)

The COVID-19 pandemic spurred many predictions and prescriptions about the resilience of human settlements, but individual disciplines have different, overlapping conceptualizations of resilience, tuned to their examination of specific areas of concern. Since a colossal range of actions and processes at multiple spatiotemporal scales were impacted, cementing our expectation of system-wide disturbances, this interdisciplinary narrative literature review applied resilience theory for CASs as a conceptual framework to identify priority areas for planning/policy transformation. The research was conducted from January-November 2020, involving a review of ~500 articles on the COVID-19 outbreak by authoritative news outlets, and 237 journal articles on disease emergence, local and community transmission, and outbreak.

Examining how shocks like novel disease emerge, why human settlements are vulnerable to them, which stresses exacerbate the impacts of these shocks, and how response diversity and adaptive capacity help buffer those impacts, revealed five planning/policy issues to prioritize. First, since urban settlements and activities facilitate pathogen transmission between species, reducing 'shocks' like zoonotic diseases and climate change requires not just prioritizing urbanization patterns and land use in urban policies for environmental health, but also animal rearing practices and biodiversity maintenance. Second, since disease transmission is linked to not just contact rate but also host susceptibility, reducing vulnerability by improving equity in access to essential infrastructures like housing, water, sanitation, healthy food, green/public spaces, healthcare—what impact human health directly and indirectly—is critical. In its absence, curbing disease transmission requires focusing on contact rate suppression, but doing so brings human activity to a halt, decimating the economy and livelihoods. Third, the persistence of many pathogens or their vectors in environmental media suggests that built environment & public health professionals must address maintenance of environmental quality at various scales. Fourth, there is a need for redundancy, be it in commodity supply chains (like PPE, food) or data management for say, monitoring & enforcement of home quarantines during a pandemic. Fifth, as the Indian state of Kerala illustrates, social adaptive capacity—which requires investing in social capital (human capital, bonding and bridging relationships), developing social networks between state and non-state actors (via trust and clear communication, reciprocal and repetitive interactions)—is critical to responding to shocks.

Case 2. Applying CAS theory to holistically study obesity prevention in SNAP

Public Policy theory, practice, and education center on linear processes, not accommodating the dynamic conditions, processes, and interdependencies that inform agenda setting and policy development. This narrative literature review of ~100 key journal articles discusses an update of public policy theory using the CAS literature, illustrated through a discussion of how to holistically, comprehensively study obesity prevention within SNAP. Obesity is an epidemic, with low-income people using SNAP benefits experiencing high obesity rates. The challenge for policy makers is providing nutritional support adequate to the economic limitations of the SNAP consumer community without incentivizing or supporting behaviors leading to obesity and its manifest negative individual and societal impacts. The contributors to these behaviors are complex, dynamic, and consist of interacting social and ecological variables, but are not studied in an integrated manner. This analysis uses our conceptual framework to identify the many variables that will require examination, explain how they are related to each other, integrate the scales of action and change, and accommodate the timeline of policy cycles.

Citations

Key Words: resilience, complex adaptive systems, public policy, pandemic

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**Track 13 Research in Motion (RiM)**

**PLANNING IN RE-EXISTENCE. DECOLONIAL CRACKS IN SETTLER-STATES**

Abstract ID: 57
Research in Motion (RiM)

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Limits of recognition of Indigenous rights and land claims are prevalent in Settler-States. In the absence of legal instruments that allow substantial engagement in the planning for urban, regional, conservation, or recreation areas, Indigenous People/s are constantly developing ways to reclaim, recover, and reimagine their Land. I refer to this as Planning IN Re-Existence. Beyond a radical or insurgent approach, Planning IN Re-Existence represents the Knowledges, actions, strategies, and mainly, the struggles Indigenous People/s experience and negotiate in order to re-exist in the space of Settler-States. Based on my research on the Bears Ears National Monument case, this paper is the result of a scoping review that informs a theoretical framework and interviews conducted with representatives from Tribal Nations, federal agencies, non-profits, and universities to document three stories that together conceptualize how Indigenous Communities re-exist in planning. The stories include how to re-exist in (1) different “scales in time” when relationships with the Land prevail in spite of the coloniality of power; (2) “the power of unity and the game of Settler-States” when Tribes work together as a coalition and participate in planning processes while using Settler-State resources to leverage a substantial involvement, and; (3) the “constellation of relationships” that unveil relationships outside the limits of conventional planning practices and communicates their diversified connections with their Land. These stories are not the result of a predefined planning activity but the response to limits of recognition, land claims, and refusal that emerge in a particular space and time. The concept each story informs as a practice of re-existence is detached from becoming a normative institutionalized strategy, and instead, they are the result of the particularities of place when Indigenous People/s re-exist. Moreover, the stories conceptualize decolonial cracks that, when weaved together, enhance a framework to challenge Settler-State Planning. Compared with previous theoretical approaches and opposite the visionary framework of coexistence, re-existence accounts for the immediate practices and struggles under the coloniality of power in planning. In this view, understanding Planning IN Re-Existence can inform planning theory on how Indigenous Peoples struggle with the colonial entanglements of policy and decision-making, but also on learning the Knowledges, actions, and strategies that emerge inside and outside the planning sphere. The consideration of planning from the Indigenous perspective plants the bases to theorize the praxis for decolonial planning in the Land.

Citations


Key Words: Re-existence, Decolonial Praxis, Indigenous Planning, Decolonial Theory, Settler-State Planning

BED BUG INFESTATION IN SUBSIDIZED HOUSING: RETHINKING PLANNING FROM THE ENTANGLEMENT OF HUMANS AND INSECTS
Abstract ID: 423
Research in Motion (RiM)

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My work seeks to understand the entangled relationship shared between humans and bed bugs through its everyday practices. In past decade there has been a rise in call for planning scholars to engage with more-than-human perspective when planning for/in uncertain world (Metzger 2014, Metzger 2015, Metzger 2019 Houston et al. 2018). More-than-human approach challenges human exceptionalism in planning by shifting the focus of planning to multispecies entanglement and has opened a fertile space of theorizing planning from subject-positions of the ‘Other’ (Hillier 2017). An emerging body of literature encourages enquiring multispecies entanglement to potentially offer alternate ways of knowing and becoming with world rather than in it (Hillier 2017, Houston et al. 2018). We need studies that foregrounds the complex entanglement to demonstrate how a complicated interaction between human and more-than-humans takes place in everyday lives of urban communities. Through my ethnographic work, I seek to present, different ways in which bed bugs and humans are entangled in their everyday practices in Champaign County, Illinois. I specifically ask: How do different communities experience the bed bug infestation? Conversely, how do bed bugs alter the experience of different communities. In doing so, I will contribute to the current discourse of human exceptionalism within planning by opening to more-than-human perspectives and agency to rethink planning theory and practice.

Citations


Key Words: bed bugs-human, More-than-human, planning theory, ways of knowing

A CONCEPTUAL FRAMEWORK FOR INTEGRATING CRITICAL EPIDEMIOLOGY AND PLANNING: ANALYZING LAND AS A STRUCTURAL DETERMINANT OF HEALTH

Abstract ID: 435
Research in Motion (RiM)

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Climate change is already impacting population health, which is directly or indirectly linked to land. That land is a structural determinant of health, is something that has been argued separately from the urban planning field and the critical epidemiology scholarship, but not combined. In a context where marginalized communities are more exposed to ecologies of exclusion and climate change impacts, conversations about land and its links to health are key. How can we understand the complex dimensions in which land and health intersect in the context of structural inequalities and unfair power relations? What are the different levels through which we can capture land as a structural determinant of health, and how does it express at the community level? Traditional approaches to epidemiology portray health inequities as an expression of individual factors without paying attention to the structural inequities and power dynamics that have exposed marginalized communities to cumulative impacts of environmental/climate injustices and their consequential health burdens in the first place. In other words, the evidence-based reasoning of the traditional view of epidemiology obscures the racist and colonial roots of many urban health inequities. On the planning side, while the scholarship discusses health disparities in communities, existent frameworks cannot entirely help us to critically discuss the complex dynamics that link land and health outcomes.

This article aims to make the case for a conceptual framework of critical epidemiology within the planning field, as a tool to understand the complexity of multi-scalar factors (from global processes to the community and individual levels) and pathways of urban health injustices. We do this by analyzing land as a structural determinant of health. We begin our analyses by reviewing the literature on critical epidemiology to understand what such scholarship can offer to the land and community health nexus. We then review critical literature on the political ecology of health, to detect dimensions that can be combined with critical epidemiology, so that we can advance towards a critical approach to studying land as a structural determinant of health in a context of climate vulnerability. There are a series of findings regarding critical epidemiology within planning. First, land functions as a structural determinant of health, to detect dimensions that can be combined with critical epidemiology, so that we can advance towards a critical approach to studying land as a structural determinant of health in a context of climate vulnerability. There are a series of findings regarding critical epidemiology within planning. First, land functions as a structural determinant of health in different dimensions (dispossession, resistance, tenure, what happens on the land, etcetera), which is then expressed in destructive and protective processes of health. Secondly, there are different pathways in which land acts as a determinant of health, one of which is environmental/climate injustices. Third, because the approach connects structural factors such as land to the community level, community can be considered a determinant of health (or a protective factor).

Connecting the scholarship of critical epidemiology with planning is relevant because the discussion can help planners to analyze processes of social reproduction and structural order, as well as their hierarchy and expression in terms of urban health outcomes. The latter has relevance for planners working on land and health questions. It can also be useful to formulate alternative urban health policy proposals that tackle the roots of the structural
determinants, thus being consequential both for urban theory and practice. Though, we argue for the need to combine critical epidemiology with the scholarship of political ecology of health within planning, which would allow us to center engaged research and community-led strategies in the land-climate-health nexus. Finally, this proposition supports the claims for speaking and learning from the South within urban studies (an “otherwise planning”), and critical health. Critical epidemiological movements in Latin America have made huge contributions to the rest of the public health field, and maybe could also do so for planning.

Citations


Key Words: critical epidemiology, land, structural determinants of health, destructive and protective processes of health, community

TOWARD JUSTICE FOR ALL: USING PLANNING THEORY TO ANALYZE STATE HISTORIC PRESERVATION PLANS

Abstract ID: 671
Research in Motion (RiM)

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When the national historic preservation policies and programs were being developed over 50 years ago, the prominent theories about management of the built environment were the rational/comprehensive models of planning focused on the importance of scientific and technical knowledge; expertise and professionalism; bureaucracy and coordination from the top; and limited public participation in the planning process. Ideas of justice were buried under the bureaucratic, expert driven, unitary approach.

Unlike planning disciplines that have since shifted theoretical basis to incorporate practices based on broadening public participation through advocacy planning, equity planning, and participatory planning, the original theory and top-down decision-making model still guides preservation practice today. Although this model has served the movement well in some regards, shortcomings to preservation practice have been identified, where an adoption of evolving planning theory has not been demonstrated. Specifically, it has been acknowledged that “Preservationists can gain much from incorporating contemporary planning theory, especially with regard to participation and building an equity agenda for preservation...”.

Examining the participatory process in developing state historic preservation plans provides an opportunity to analyze theories of justice in preservation planning. State Historic Preservation Offices are required through the National Historic Preservation Act to create and implement comprehensive preservation plans updated on a recurring basis. As part of plan development, each state is mandated not only to conduct public participation but also to document the participation process. To date, there has not been any academic research analyzing the state plans to understand methodology, trends, challenges and opportunities of the participation process and how it relates to planning theories of justice. This research is designed to answer the following questions:

How are planning theories of justice reflected in state historic preservation plans?
Is there a relationship between participation processes and more just outcomes in state historic preservation plans? Research will examine the history and context of state historic preservation plans highlighting the untapped potential of the plans in informing justice in the preservation participation process. This initial phase of research will review all current plans through a justice typology framework. The typology will identify justice principles that are most applicable to preservation plans and provide preservation-specific examples of how principles of justice can be present in state historic preservation plans.

Methodology for research will include using qualitative evaluation software to conduct inductive analysis by organizing and coding themes across the data sources. This will include application of the justice typology as part of the coding analysis. Data will be interpreted by identifying trends, summarizing findings, stating limitations of the data, and comparing data to findings in the literature of justice theory. The results will reveal the primary methods of participation that are currently being used by preservation planning and how those methods reflect theories of justice in participatory planning. This initial analysis will uncover a small number of selected states to continue with additional phases of research to include more in-depth examination of participation in state preservation plan development.

This is likely the only national level systematic analysis of participation in historic preservation and in addition to addressing a gap in research will serve to inform preservation practices. This research comes at a crucial time when the preservation field is addressing equity issues surrounding participation. This inadequacy affects all wishing to participate in the identification and celebration of cultural heritage, but more strongly impacts under-represented and marginalized communities who traditionally have been excluded in preservation practice. Addressing these potential shortcomings in preservation practice is particularly critical now for a changing society that demands social justice, human rights and an ethical approach to policy making.

Citations


Key Words: historic preservation, justice, theory, participation, state plans
protecting an ensemble of historic resources. The designation of local historic districts not only certifies historic significance of a neighborhood but also acts as a prerequisite for policy interventions (Schuster, 2002). However, it has been argued that the historic district designation process has overlooked the history of minority populations (Avrami, 2020; Hayden, 1988). Many such neighborhoods that are designated as local historic districts experience the displacement of minority populations who are vulnerable to increasing property values and rising rents following the designations. However, there is limited empirical evidence on the association of neighborhood characteristics with local historic district designations, in contrast to a substantial body of research on neighborhood effects after the designations (Noonan & Krupka, 2010). To address this gap in literature, we examine whether historically redlined or recently segregated neighborhoods have fewer or more local historic district designations than non-redlined or non-segregated neighborhoods.

We use a binary logistic model to analyze the relationship between local historic district designations and historical and recent patterns of spatial segregation in thirty-two US cities. These cities had a population of over 200,000 in 1940 when the Home Owners’ Loan Corporation (HOLC) finished creating neighborhood evaluation maps and provided spatial and additional data that informed the local historic districts. We constructed separate models for each decade from 1970 to 2010 to account for different neighborhood characteristics at the times of designation, using the Neighborhood Change Database that normalized decennial census data to 2010 census tracts. The dependent variable of our model is whether a neighborhood is designated as a local historic district or not. The independent variables are the HOLC neighborhood grades and the Getis-Ord local Gi* statistics. We used the digitized HOLC residential security map representing historical redlining (Nelson et al., 2018) We also calculated the Gi* statistics using the proportion of Black and Hispanic populations and the poverty rate between 1970 and 2010 for recent residential segregation. In accordance with previous studies (Noonan & Krupka, 2010), we controlled for the ratio of older buildings and neighborhood socioeconomic and housing characteristics relevant to historic designations.

Our analysis of the relationship between locally designated districts and the HOLC grades shows mostly insignificant results. Only in some decades, grade B neighborhoods were significantly likely to host more local historic districts than redlined areas after accounting for neighborhood variables. However, the analysis of the Gi* statistics reveals significant shifts in the patterns of local historic district designations between the 20th and 21st centuries. Local historic districts were more likely to be found in racially or economically segregated neighborhoods between the 1970s and 1990s, whereas these segregated neighborhoods have been less likely to be designated as local historic districts since the 2000s. The main thrust of this research is to investigate if the designations of local historic districts mitigate or reinforce historically institutionalized spatial segregation in selected US cities. The findings can offer empirical support for ongoing conversations regarding preservation policies and practices that prioritize inclusivity and equity (Avrami, 2020).

Citations

REGULATED HOMES: UNDERSTANDING LAND USE REGULATION THROUGH HOMEOWNERSHIP
Abstract ID: 1136
Research in Motion (RiM)

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In March 2021, members of the Minnesota Senate came together for a hearing that would address a draft of the Legalizing Affordable Housing Act or SF 3259. Authored by senators from both the republican and democratic parties, the bill proposed to make it easier to build more housing on a state-wide level by lowering regulations on residential development and building single-family homes on smaller lot sizes amongst other changes. A litany of members of the public showed up to give testimony to support and oppose this plan. However, it was surprising that legislative members from both sides of the aisle espoused SF 3259—a bill that imagines a higher density urban future. This was surprising because at the local level, residential densification has seen a massive pushback from more conservative groups especially homeowners. The capturing of the densification debate at the state level is emblematic of a turn towards maintaining homeownership as an aspirational goal, with legislators on both sides emphasizing that the bill would most markedly make it easier for younger Americans to buy starter homes. This moment marks an important turn in the symbolism associated with single-family home ownership, and what it has come to signify in the American consciousness.

Single family homes represent the fulcrum of modern land-use regulation. Specifically, research has demonstrated how modern zoning regulations were employed and developed to safeguard and promote single family home ownership (examples: Trounstine 2018, Hirt 2015). However, while progressive YIMBYs have wholeheartedly taken up the work of promoting a radical do-away with zoning regulations, a small but growing number of people are beginning to embrace zoning change to maintain home ownership. Thus at a time when several antagonistic groups are joining in the debate on zoning and land use regulation change, it is important to consider the history and evolution of the single family homes and what it signifies in the present moment for both urban residents and governing.

This paper attempts to trace the history of the single family home as an object of enquiry. In doing so, it also builds an understanding of how zoning has been historically used to advance home ownership that not only enabled a certain segment of the population to be homeowners but also altered the larger spatial and social dynamics of cities. Zoning changes that are underway in many cities and states point to the changing nature of this spatial structure. But more importantly, it also signals the ways in which the housing crisis is interpreted and responded to. Using archival research from the Minnesota History Center and following the case of Minnesota, this paper traces the history of single family homes starting from the urban renewal period to the recent housing market challenges since the COVID-19 pandemic and the role of the private sector in the housing market. This narrative reveals how the objective of homeownership has led to an urban terrain that is marked by rising inequality between homeowners and renters, higher housing prices, nebulous home ownership practices through private renters and trailer homes and is forcing new development to rely on a liberalized land use regulation regime to spur homeownership. This paper brings to light the state’s incessant promotion of homeownership as a means to build wealth and create value and has important implications on how the state chooses to distribute resources in governing.

Citations


Key Words: single family homes, homeownership, land use regulation, planning history
PLANNING CITIES AROUND PEDESTRIANS: FROM MODELING CARS TO MODELING PEOPLE.
Pre-Organized Session 21 - Summary
Session Includes 132, 133, 134, 135

After a century of car-oriented urban growth, cities are implementing policies and plans that aim to make their neighborhoods and streets more walkable and transit oriented. Renewed attention to walkability is driven simultaneously by the impending climate crisis, public health concerns, and inter-city economic competition. This has given rise to increasing demands to scrutinize how newly proposed urban plans and developments may affect non-motorized mobility around them as well as strategies and tactics that can increase walking behavior in existing city environments. While traffic impact studies (TIS) are widely used to assess mobility impacts of larger development projects, whether and how pedestrian journeys are captured in TIS’s is notably less rigorous than vehicular traffic impact assessment models. Significant gaps also remain in understanding which demographic groups are most likely to walk in American cities and how access to walkable neighborhoods is constrained by race and class, gender and age. This session invites active mobility, urban design and planning scholars to explore the nexus between urban development and pedestrian activity.

Objectives:

- Examine recent research connecting urban planning with pedestrian activity

WALKABILITY AND HOUSING VALUE
Abstract ID: 132
Abstract within Pre-Organized Session 21

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Studies of housing value widely make use of Walk Score® to measure walkability and identify its influence on housing prices. However, Walk Score, though generally accepted as a valid measure of neighborhood walkability, has some distinct disadvantages: 1) It is a proprietary product and costs money for researchers to purchase 2) though Walk Score has some accompanying documentation, the precise formula for its calculation is not disclosed, so it fails to meet the scientific criteria of transparency and replicability. In this study, we gather and construct assorted free data on walkability and compare these data’s correlation with housing value with that of Walk Score. Examining single-family home sales from 2018 for the urbanized portions of Miami-Dade County, Florida, and King County, Washington, we run hedonic regressions of housing value with various walkability measures and a
conventional set of control variables (i.e. square feet of structure, etc.) expected to correlate with housing price. The walkability measures evaluated include a variety of street network variables, land-use mix variables, a freely available national walking-to-jobs accessibility variable, park proximity variables, and a block-level walkability index provided by the EPA. We find that EPA’s walkability index and one of the mixed-use variables have similar effect sizes and t-statistics in comparison with Walk Score in terms of explaining housing value in both locations. Furthermore, the EPA Index is more robust to the introduction of zip code dummy variables. Additional findings include that the value of walkability varies depending upon the level of poverty present, with walkability offering an increased price premium in low-poverty areas, and that street network variables were significant in the King County study area but not in the Miami-Dade area. Our results suggest that researchers and planning practitioners interested in the effect of walkability on housing and land prices may find adequate free alternatives to Walk Score, in particular the EPA Index. We also argue that as a valuable nation-wide data source on walkability open to all researchers and practitioners, the EPA Walkability Index should be regularly updated.

Citations


Key Words: Walkability, Housing Value, Street Networks, Hedonic Modeling, Land-Use Mix

PLANNING FOR THE PEDESTRIAN EXPERIENCE: A FRAMEWORK FOR INTERDISCIPLINARY RESEARCH
Abstract ID: 133
Abstract within Pre-Organized Session 21

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With the intention of guiding public policy, pedestrian research within the transportation planning field has often focused on identifying the various characteristics of the built and natural environment that support walking behaviors (e.g., Le et al. 2018). This line of inquiry has established associations between various dimensions of pedestrian travel and the environment, both domains measured objectively and subjectively over numerous spatial and temporal scales. As the dominant transportation planning paradigm is shifting away from mobility-centric goals to more sustainable and equitable outcomes, the need to understand more about the experiences that people encounter while traveling and the processes governing their behavior are coming to the forefront (e.g., Mokhtarian 2019). Although theories and concepts from the field of psychology have long been incorporated into travel behavior research, there are new opportunities for collaboration that are mutually beneficial. This paper establishes a framework for interdisciplinary research between planners and psychologists and presents the theoretical and practical issues associated with this ambitious research agenda.

Within the cognitive sciences, the active mobility of individuals has also been a topic of research with an emphasis
on movement taking place within a brain-body-environment system. Paramount here are the brain-body interactions that enable the act of walking and that are, in turn, shaped by our physical movements through the environment. In this, conceptualizations of the environment are typically narrow in scope, focusing on the immediate social or physical environment (Rentfrow and Jokela 2016). Experimental work often takes place in controlled laboratory settings and aspects of walking such as gait kinetics – walking speed, stride length, and stride timing – or the total time spent engaging in active transportation is associated with cognitive function. Alternately, in transportation planning studies, the role of the brain and body in facilitating pedestrian movement is largely absent, and at best, implied. Planners largely conceptualize individual trips and their characteristics, such as origins, destinations, routes, and travel time or distance, taken over the course of daily activity, and with less emphasis on the fine-grained variations that occur over the course of a trip.

The calls to amplify the importance of behavioral processes and travel experiences within transportation planning and the desire for more “real world” experimentation by cognitive psychologists (Ladouce et al. 2017) present a prime opportunity for interdisciplinary research. To initiate such a pedestrian research collaboration, we propose the adoption of a brain-body-environment framework married with methodological approaches that capture the dynamic interactions between our minds and brains on the one hand, and our bodies and environments on the other. Drawing upon the rich literature in the planning, geography, and psychology fields, this paper will highlight how understanding the pedestrian experience through this framework of brain, body, and environment interactions and interdependencies can drive novel, interdisciplinary research into vital issues of personal and public health.

Citations


Key Words: pedestrians, cognitive psychology, environment, subjective well being, experiences

PEDESTRIAN URBAN NETWORK ANALYSIS: A FRAMEWORK FOR MODELING PEDESTRIAN ACTIVITY AND NON-AUTO DEVELOPMENT IMPACTS IN CITIES.
Abstract ID: 134
Abstract within Pre-Organized Session 21

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The global climate-change crisis, along with public health and economic competitiveness challenges in cities have underscored the need for analytic tools to examine the relationship between city design and active mobility. While traffic impact studies (TIS) are widely used to assess mobility impacts of larger development projects, pedestrian journeys, if included at all, are typically captured less rigorously than vehicular journeys (Combs et al 2020). TIS's
normally also only focus on journey to work trips, leaving out non-commuting trips on foot that form a significant share of all walking trips. Planners’ ability to systematically assess and forecast walkability outcomes of planned developments thus requires new and consistent approaches (Handy 2018).

Addressing this need, we present the Pedestrian Urban Network Analysis (P-UNA) framework and software tools for a) estimating foot-traffic volumes on individual street segments in a city and b) assessing the impacts of proposed plans or development projects on pedestrian accessibility and flow around them (Zhang et al. 2022). We compare our trip generation, trip distribution, mode choice and route choice assumptions to existing pedestrian travel demand models and outline both our unique conceptual improvements to estimate urban foot-traffic based on land use and demographic interactions (O-D pairs) at the spatial resolution of individual address points and along sidewalk networks.

We apply the P-UNA model in New York City to estimate foot-traffic volumes for individual sidewalk segments in large parts of the city during AM, lunch, and PM peak travel periods (Cooper et al. 2019). The model estimates are calibrated on over 3,000 observed pedestrian segment counts from 2018. We then use the calibrated model to forecast how specific changes in urban development and pedestrian infrastructure implemented in 2018 would impact pedestrian accessibility and pedestrian flows around them, and use the following year’s pedestrian count data from 2019 to examine the predictive accuracy of such forecasts. The model allows pedestrian impacts analyses to account for demographic change (e.g. change household incomes in an area), land use change (e.g. new developments, employment or residential change in existing developments) and physical change in pedestrian infrastructure (e.g. sidewalk widening, traffic calming) (Erath et al 2015).

The proposed framework can be used to illustrate how changes in the built environment are likely to impact pedestrian accessibility and flows around them and to inform planners where improvements (e.g. safe crossings, sidewalk or public space investments) could benefit the most constituents. Extending the widely adopted Traffic Impact Assessments, the work contributes to frameworks for planning cities around pedestrian rather than vehicular needs.

Citations


Key Words: Pedestrian behavior, modeling, networks, walkability, impact assessment

WILL GLOBAL WARMING MAKE OUR CITIES LESS WALKABLE? EXPLORING THE LINK BETWEEN OUTDOOR THERMAL COMFORT AND ACTIVE MOBILITY IN US METRO AREAS

Abstract ID: 135
Abstract within Pre-Organized Session 21

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The impact of rising temperatures on cities is a critical concern, as extreme heat waves and the urban heat island effect can have significant implications for public health, urban mobility, and the use of public spaces. This paper presents a novel approach to investigating the relationship between outdoor thermal comfort and mobility mode choices, using an ML-based modeling framework and a sensitivity analysis. By combining travel and census data, urban 3D building geometry and their characteristics, and street-level microclimate simulations, we predict pedestrian thermal stress using the Universal Thermal Climate Index (UTCI) for several at-risk US metropolitan areas, such as Los Angeles, CA, Phoenix, AZ, Atlanta, GA, Cape Coral, FL, and New Orleans, LA. Based on this analysis, we train a predictive model for intra-city mobility patterns and test the impact of UTCI features on travel mode and duration choices through sensitivity and spatial heterogeneity analysis. We hope that our approach can be leveraged to inform urban design decision-making and can help with mitigating thermal stress in urban areas.

Citations


Key Words: microclimate, mode choice, simulation

EXPLORING MICROMOBILITY: RESEARCH ON SAFETY, EQUITY, TRANSIT INTEGRATION, AND TESTBEDS
Pre-Organized Session 36 - Summary
Session Includes 289, 290, 291, 292, 293

Micromobility is a growing trend in transportation, referring to small, lightweight vehicles such as bicycles, electric scooters, and electric bikes. It provides a sustainable, affordable, and efficient mode of transportation, with ridership increasing in recent years. Micromobility offers benefits such as reducing air pollution, mitigating climate change, and improving physical activity. However, safety, equity, and potential parking issues are major concerns associated with micromobility. To address these issues, this research-in-motion session is organized with presentations covering topics, such as micromobility safety, equity, routing, travel behavior, parking, integration with other transportation modes, and an e-scooter testbed. The presentations will provide valuable insights into the challenges and opportunities related to micromobility planning and research.

Objectives:

- Latest findings on micromobility safety, equity, travel behavior, routing, and parking issues
- Protocols for partnering with a micromobility testbed infrastructure, which is currently underway in San Antonio and will be open to the research community.
ASSESSING SAFETY, RISKY BEHAVIOR, AND GENDER PARITY IN MICROMOBILITY USAGE DURING A POP-UP BIKE LANE PROJECT
Abstract ID: 289
Abstract within Pre-Organized Session 36

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Micromobility usage has rapidly increased in the last decade (NACTO, 2020). Shared e-scooters and privately owned bicycles remain two prominent modes of active travel, yet few studies have comprehensively analyzed behavioral differences between the two modes (Dill, 2019; Haworth et al., 2021). Micromobility vehicles share numerous characteristics and planning resources have addressed them without differentiating between vehicle type. In April 2022, we worked with the City of Asbury Park to implement a pop-up bike lane in order to holistically assess the safety of non-motorists. In a natural experiment, we analyze the user behavior of over 700 micromobility vehicles and 5,000 motor vehicles. First, we investigate the safety precautions, gender split and differences, and group behavior of shared e-scooter users and privately owned bicyclists by observing traffic camera footage. Second, we use computer vision techniques to estimate the traffic calming effect of the delineated pop-up bike lane.

We find that shared e-scooter users are more likely to ride in group, in the afternoon, and on weekends; less likely to wear a helmet; and generally have an even gender split. Private cyclists are far more likely to be men, to ride alone and on the bike lane, and are just as likely to ride on weekdays than on weekends. Helmet use is low among cyclists (35%) and non-existent among e-scooter users. Male cyclists were also more likely to wear a helmet than female cyclists. In a multi-variate regression, we find that those who wore a helmet were more likely to ride in lanes with traffic than those who did not wear one.

As for the effect of implementing a pop-up bike lane, we find that road use (riding in a traffic lane) was reduced from 84% to 22% for both e-scooter users and bicyclists. Around two thirds of micromobility users used the bike lane, with the remaining 22% and 12% using the traffic lane and the sidewalk, respectively. Bike lanes are associated with reduced crash risk and severity for cyclists and protected bike lanes are a FHWA proven safety countermeasure (FHWA, 2022). However, the relationship between bicycle lanes and motor-vehicle speed is less clear. By processing the camera footage using computer vision techniques (Shuai et al., 2021), we estimate the speed of each vehicle. We find a reduction of around 22% in speed from vehicles making a right turn associated with the implementation of the bike lane. This effect is after controlling for time and traffic flow, turning direction, and traffic light signal.

We have two main conclusions: the first is with respect to micromobility users and the second is with bike lane safety. First, users, behaviors, and safety precautions differed based on the micromobility mode. E-scooter users appeared to take fewer safety precautions: they were less likely to use the bike lane and less likely to wear a helmet than cyclists. E-scooters, however, also appeared to attract more women. Around 52% of shared e-scooter users were women, compared to 21% of privately owned bicycle users. Women were also more inclined to use the sidewalk, both among cyclists and e-scooter users. Meanwhile, our second conclusion is that delineator-protected bike lanes may have a traffic calming effects for vehicles turning right, which has benefits for pedestrians and cyclists. We suggest that planners consider protected bike lanes, especially as helmet use in the town was low among cyclists and non-existent among e-scooter users. Additionally, implementing e-scooter programs, combined
with proper bike lane infrastructure, may attract women to use active modes of travel.

Citations


Key Words: micromobility, bike lane, safety, tactical urbanism, active travel

HOW DOES A CAMPUS ADJUST TO E-SCOOTERS? FINDINGS FROM VIRGINIA TECH’S PARTNERSHIP WITH AN E-SCOOTER PROVIDER

Abstract ID: 290
Abstract within Pre-Organized Session 36

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Between September 2019 and May 2022, an e-scooter provider operated a fleet of up to 325 e-scooters on the Virginia Tech campus in Blacksburg, Virginia. The e-scooter provider worked closely with a team of researchers at Virginia Tech to study how the campus adapted to e-scooters in terms of travel behavior, route choice, parking, and safety. This presentation reports on results of four studies about e-scooters on campus.

The first study was based on two cross-sectional surveys deployed before (n = 462) and after (n = 428) the launch of a fleet of shared e-scooters on Virginia Tech’s campus in Blacksburg, VA. This allowed for a pre–post comparison of attitudes and preferences of e-scooter riders and nonusers. E-scooter ridership on campus followed patterns identified in other studies, with a greater share of younger riders, in particular undergraduate students. Stated intention to ride before system launch was greater than actual ridership. The drop-off between prelaunch intention to ride and actual riding was strongest for older age groups, women, and university staff. As in city surveys, the main reasons for riding e-scooters on campus were travel speed and fun of riding. About 30% indicated using e-scooters to ride to parking lots or to access public transport service. Perceptions about convenience, cost, safety, parking, rider behavior, and usefulness of the e-scooter systems were more positive among nonriders after system launch, indicating that pilot projects may improve public perceptions of e-scooters.

The second study developed an e-scooter route choice model to reveal riders’ preferences for different types of transportation infrastructures, using revealed preferences data. The data were collected using Global Positioning System units installed on e-scooters operating on Virginia Tech’s campus. The study applied the Recursive Logit route choice model to 2000 randomly sampled e-scooter trajectories. The model results suggest e-scooter riders are willing to travel longer distances to ride in bikeways (59% longer), multi-use paths (29%), tertiary roads (15%), and one-way roads (21%). E-scooter users also prefer shorter and simpler routes. Finally, slope is not a determinant for e-scooter route choice, likely because e-scooters are powered by electricity.

The third study analyzed ridership trends and rider perceptions before and after introduction of mandatory e-scooter parking corrals in January 2022. The analysis relied on a panel of 131 e-scooter riders surveyed in Fall 2021 and Spring 2022. Although parking corrals were perceived favorably prior to implementation, perceptions became more negative afterwards. Respondents said corrals were not located where needed, difficult to find, fully
occupied, and took too much extra time to use. After parking corrals were introduced, ridership declined 72% overall and also fell for all socio-economic subgroups. The study finds that roughly two-thirds of riders desired egress times under 2 min and one quarter under 1 min.

The fourth study collected naturalistic e-scooter riding data and quantified the safety risks associated with behavioral, infrastructure, and environmental factors. Fifty e-scooters were equipped with a unique onboard data acquisition system, using sensors and video to capture trips in their entirety. Algorithms were developed to identify safety critical events (SCEs) in the dataset and analyses were conducted to determine the prevalence of various SCE risk factors and associated odds ratios. Results from this study indicate that infrastructure-related factors, behavior of e-scooter riders and other actors, and environmental factors all contributed to the SCE risk for e-scooter riders. To help mitigate unsafe rider behavior, educational outreach programs should quantify the significant risks associated with infrastructure, behavioral, and environmental risk factors and provide clear recommendations to riders. Improved infrastructure maintenance and design may also improve safety for e-scooter riders.

Citations


Key Words: e-scooter, parking, travel behavior, safety

MICROMOBILITY FOR ALL: RIDER SATISFACTION, IMPLEMENTATION CHALLENGES, AND BEHAVIORAL INTENTIONS

Abstract ID: 291
Abstract within Pre-Organized Session 36

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Rapid advancements in transportation technology have resulted in new personal mobility modes including shared micromobility systems (e.g., e-scooters, bikes, and e-bikes). These short-term rental vehicles offer affordable, convenient, and efficient options that expand transportation mobility. However, the rapid expansion of micromobility systems, and in particular dockless systems, has presented challenges for cities globally, leading some to ban or limit these services within their jurisdictions. To address the challenges created by micromobility systems and to achieve better implementation performance cities need efficacious strategies to tackle known challenges. Therefore, the primary goal of this paper is to offer effective solutions and essential tools to maximize the use of shared micromobility systems, address challenges created by these services, and to expand theoretical understandings of rider behavior.

First, this paper presents techniques for analyzing areas and roadway segments with high micromobility parking
and vehicle demand. Proposed processes support efforts to assign free-floating parking, reduce vehicle clutter on city sidewalks, and identify locations for road infrastructure improvement and ordinance enhancement. An unsupervised learning approach using vendor launching site analysis is used to appropriately locate dockless vehicle parking zones. A comparison of three methods for identifying high demand micromobility corridors is also presented. Second, this paper develops a framework, using the shortest path routing algorithm, to assign e-scooter route trajectories that meet multiple criteria including safety, comfort, and ordinance restrictions. Third, this paper explores public acceptance of next generation autonomous micromobility systems; a technology identified as offering potential solutions for known micromobility autonomous challenges. Exploration of public acceptance builds on existing work to assess factors contributing to e-scooter rider satisfaction as a means to address user needs and barriers. Results from text mining analysis showed that a policy approach focused on improving rider satisfaction should address contributing factors such as ease of use, safety, vehicle operation (i.e., speed) and riding lanes (i.e., infrastructure condition). Findings also showed differences in rider satisfaction factors across gender. As a follow up, a nationwide survey, developed using the Unified Theory of Acceptance and Use of Technology (UTAUT2) framework, was conducted to measure factors influencing acceptance of next-generation autonomous micromobility systems.

The survey was modified and deployed with two main contributions to planning practice in mind. First, to deepen our understanding of factors to be considered in the effective design, implementation, and deployment of autonomous micromobility systems. Second, to advance theoretical underpinnings needed to test user acceptance of next-generation micromobility systems before implementation. As an additional contribution to planning practice, the route guidance tool can be required by cities and adopted by e-scooter providers as a software platform to support safe and comfortable route guidance decisions.

Citations


Key Words: Micromobility, Routes, Behavior, Implementation, Autonomous

SHARED E-SCOOTERS AS A LAST-MILE TRANSIT SOLUTION? TRAVEL BEHAVIOR INSIGHTS FROM LOS ANGELES AND WASHINGTON D.C.

Abstract ID: 292
Abstract within Pre-Organized Session 36

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Shared e-scooters are quickly emerging in the U.S., presenting potential to enhance public transit by serving as a last-mile feeder mode. Some transportation professionals see great potential for shared e-scooters to enhance existing public transit systems (Murphy et al., 2021; Shaheen and Chan, 2016). In particular, fixed route public transit has long faced challenges of the first- and last-mile problem (commonly referred to as the last-mile
problem), meaning users must travel to a bus stop or rail station rather than traveling directly to and from the doorsteps of their origin and destinations (Lesh, 2013). The last-mile problem can deter travelers from riding transit, causing transit ridership to be lower than its potential. Accessible and affordable shared e-scooter services hold potential to solve the last-mile problem through their flexibility and ability to expand the service radius of transit stops beyond the typical walking distance. Chained e-scooter and transit trips can not only enhance the transit experience, but also contribute to a modal shift from short- to medium-distance car trips.

The potential for combined e-scooter and transit trips depends upon service coordination between e-scooter operators and transit agencies (Yan et al., 2021), supportive infrastructure such as e-scooter parking at transit stations and safe bike lanes connecting with transit stops, and policy enactments that promote multimodal integration. More fundamentally, travelers need to consider e-scooters a viable option for last-mile transit connectivity. However, so far we have limited knowledge on user preferences and travel behavior with regards to e-scooter and transit integration. This research aims to address this research gap by asking the following research questions: How often do people consider using e-scooters to connect with transit, and what factors shape this intention? How frequently do e-scooter riders use shared e-scooters as a last-mile feeder mode, and what factors are associated with this frequency?

We conducted a travel behavior survey in Washington D.C. and Los Angeles, California, both early adopters of dockless micromobility. We find that the last-mile problem deters transit use for about 70% respondents, among whom over 60% of them have considered e-scooters for last-mile transit connections. However, this intention frequently did not translate to actual use due to a variety of barriers. Strategies to address these barriers involve providing bundled fares, integrated payment options, more e-scooters near transit stops and areas of work, along with improving bike lane infrastructure, safety rating of e-scooters, and improving convenience integrating the two modes. We further developed statistical models to examine factors shaping intention and actual use of shared e-scooters as a last-mile solution. Results suggest the outcomes of interest are positively associated with transit use frequency and safety rating of e-scooter riding. Somewhat surprisingly, household income is not a significant variable in all models. Women and older adults were less likely to consider using e-scooters as a last-mile feeder mode. People of color and people without a college degree are as likely as Whites and college graduates to consider using shared e-scooters for transit connections; in fact, the former groups do so more frequently than the latter groups. To promote transit and micromobility integration, policymakers may introduce bundled fares, integrated payment, promote e-scooter safety, increase e-scooters availability at transit stops, and improve bike lane infrastructure connecting to transit.

The insights gained from this study have practical implications. Our results highlight the significance of the last-mile problem, along with the high potential of shared e-scooters as a solution. This study also reveals how shared e-scooter and transit integration can promote transport equity.

Citations


Key Words: Electric scooters, micromobility, public transit, last-mile problem, travel behavior
SCOOTERLAB - PROTOCOLS FOR PARTNERSHIP WITH A MICROMOBILITY TESTBED IN SAN ANTONIO
Abstract ID: 293
Abstract within Pre-Organized Session 36

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Research on planning for micromobility is limited by the types of data accessible, which is often limited by operational vendors, and difficulty with engaging directly with riders as research participants. ScooterLab is an NSF-funded testbed in San Antonio (TX) that is retrofitting e-scooters with state-of-the-art sensors in partnership with collaborators, enabling real-time collection of fine-grained research data from micromobility rides. Because participants join research protocols under human subject protections, researchers can engage with individuals to gain knowledge about the human dimensions of their micromobility use. The presented protocols describe how the research community can engage with the ScooterLab testbed to run micromobility experiments. Rather than developing and dismantling protocols and infrastructures for a single study, ScooterLab supports the rapid deployment of interdisciplinary research at the confluence of (micro)mobility, urban planning, transportation research, and multiple computing disciplines, including machine learning, computer vision, image processing, and privacy-enhancing technologies. Community researchers can also access curated datasets from past experiments through web interfaces. Presented protocols for partnership support collaborative research with crowd-sensed, fine-grained, multi-sensor scientific data, enabling new research breakthroughs in interdisciplinary domains.

Citations


Key Words: micromobility, crowdsensing, big data, privacy

Track 14 Roundtables

CUTTING ACROSS THE CURB - A MULTI-PERSPECTIVE DISCUSSION ON URBAN CURB MANAGEMENT
Abstract ID: 58
Roundtable

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The curb is perhaps the most complex and dynamic space within the urban street right-of-way. This roundtable discussion aims to bring together scholars from across the various planning areas including: transportation and infrastructure; urban design and public space; as well as policy and governance to engage critical questions and discussion around managing the curb for both contemporary and future uses. This area is wanting for engagement, especially from a multi-perspective approach as ideas of what the curb can be have been broadening beyond its use for parking (Brutrina et. al, 2020; Manville & Pinski, 2021). These shifts have only accelerated in response to the covid-19 pandemic (Gregg et.al, 2022). The curb may be conceptualized as part of urban commons and public space (Mandhan & Gregg, 2023), or it may be viewed as a critical connector for pick-up and drop off zones or freight deliveries (Brutrina et. al, 2020; Diehl, Ranjbari, & Goodchild, 2021; Manville & Pinski, 2021). This space can also be dangerous and inaccessible for delivery workers (iacobucci et. al., forthcoming) and those who use mobility assistance devices. Additionally, the curb lane and the adjacent sidewalk are also often viewed as an opportunity for providing alternatives to automobiles, where bicycle lanes occupy curbside parking areas and shared mobility or micro-mobility options are available (Brutrina et. al, 2020; Diehl, Ranjbari, & Goodchild, 2021). Each of these interests are competing for the use of the curb creating scarcity; and with this, access to the curb on urban streets is increasingly contested among the multiple competing uses (Manville & Pinski, 2021). Due to this complex nature and competing interests, the management of the curb is often siloed in different bureaucratic branches within municipalities and transportation departments, and may be managed with ad-hoc and untested approaches (de Cerreño, 2004; Brutrina et. al, 2020). This management might range between: parking enforcement, public utilities, public space, departments of transportation, and business interests, among others (Brutrina et. al, 2020; de Cerreño, 2004). Furthermore, interests in managing and mapping the curb are emerging from the technology sectors (Diehl, Ranjbari, & Goodchild, 2021; Hao et.al 2023).

Citations


Key Words: curb management, street design, transportation planning, municipal governance

Track 14 Individual Paper Submissions
WHICH DISTINGUISHED FEATURES OF RAPID TRANSIT SYSTEMS ARE CONDUCIVE TO RIDERSHIP?

Abstract ID: 16
Individual Paper

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Many metropolitan areas have a sustained interest in capital investments on streetcars and rapid transit, such as light rail transit (LRT) and bus rapid transit (BRT). These types of transit share some distinguished features, including frequent service, off-board fare collection, multi-door boarding/alighting, enhanced stations, specialized vehicles, advanced information system, intersection treatments (such as turn restrictions and queue jump), and transit signal priority. Some routes also use exclusive right of way (ROW) or semi-exclusive ROW, which is dedicated to transit use for a certain time of day (e.g., peak hour) or allows certain traffic (e.g., right-turning traffic) to use the facility. Because exclusive or semi-exclusive ROW is a costly and contentious feature of rapid transit systems, there is a growing interest in arterial BRTs, which operate in the mixed traffic environment (Cain et al., 2009).

When designing a rapid transit system, transit planners adopt a bundle of distinguished features. However, their choice is often based on development guides and best practices (TCRP, 2007). In fact, the academic literature offers limited evidence on how the distinguished features are associated with transit ridership (Currie and Delbosc, 2013; Hensher and Li, 2012; Ko et al., 2019). This understanding is critical to the success and cost-effectiveness of rapid transit systems. To fill the gap, this study applied gradient boosting decision trees to data collected from 65 LRT, BRT, and streetcars in the U.S. We examined the ridership impacts of some distinguished features, controlling for other route and service attributes, built environment characteristics, socio-demographics, and regional characteristics.

The results show that service frequency, intersection treatments, and ROW are important to predicting yearly transit ridership. Reducing the headway from 15 minutes to 10 minutes is associated with an increase of 50,000 passengers. Transit routes with intersection treatments serve 130,000 more passengers than those without the treatment. Transit routes with semi-exclusive ROW serve 90,000 more passengers than those in mixed traffic. If the three features are adopted together, the ridership bonus will be about 270,000 passengers, equivalent to 21% of the average route ridership (1.27 million) in the data. Moreover, the most important predictors of transit ridership are population density along transit routes and the number of stops. They carry about 40% of the predictive power. These suggest that the potential demand is key to the success of rapid transit systems, but several distinguished features do facilitate ridership. However, off-board fare collection, multi-door boarding/alighting, enhanced stations, specialized vehicles, and transit signal priority have trivial effects. The contribution of advanced information system is also tiny because almost all systems have the feature.

Citations


Key Words: rapid transit, light rail transit, direct ridership model, right of way, quality of service
AUTHORIZED VEHICLES ONLY: POLICE, PARKING, AND PEDESTRIAN ACCESS IN NEW YORK CITY
Abstract ID: 32
Individual Paper

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Sidewalks and crosswalks do not benefit pedestrians if they are blocked by automobiles. In New York City, local media have documented that cars outside of law-enforcement offices routinely park on sidewalks and in crosswalks. This study systematically and longitudinally pursues this topic by tracking the geographic extent of this obstructive parking via in-person observation of the streets surrounding all 77 New York Police Department (NYPD) station houses, across all five boroughs. Combined with review of historical street imagery, this approach reveals widespread and longstanding parking on sidewalks, and to a lesser extent, in crosswalks. Such parking is present at over 90% of all precincts, and often extends along the entire block (and not simply in front of station houses), on adjacent blocks, and on both sides of the street. This renders many sidewalks impassable – forcing pedestrians into traffic – and in many cases directly abuts residences and businesses, curtailing access to such destinations. Longitudinally, these kinds of parking date back a decade on average in observed locations, indicating this has become the default, rather than occasional use of such streets. In-person observation also demonstrated other ways such parking had negative effects on access and safety surrounding NYPD station houses, including double parking, obstruction of bus and bike lanes, and blocking of sidewalk fire hydrants. These findings broaden the study of pedestrian accessibility beyond the quality and design of sidewalks and intersections, to include chronic automotive obstruction, and indicate that parking behavior of certain public-employee categories, if left unchecked, significantly degrades walkability.

Citations


Key Words: Parking, Pedestrians, Sidewalks, Crosswalks

A TALE OF TWO AGING NATIONS: HOW DO URBAN DESIGNS IMPACT ELDERLY MOBILITY IN AUTOMOBILE VERSUS TRANSIT SOCIETIES?
Abstract ID: 38
Individual Paper

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Sustainability strategies have called for dense and accessible neighborhood designs to facilitate convenient access to desirable destinations for all, with a particular attention to transportation-disadvantaged populations such as older adults (65+). Yet, compact designs often overlook the mobility needs of older people even though aging populations are growing substantially (Giuliano, 2004; Newbold, 2015). The relative lack of studies further leaves the relationship between land use and elderly mobility patterns unclear: some find that built environments play a
significant role in older adults’ mobility, but others reveal that the urban forms have little impacts (Giuliano, 2004; Kim, 2003; Mitra et al., 2021). Could these mixed results relate to the macro-regional designs and automobile-oriented culture that offset/retain the effectiveness of the local land uses (Cervero & Gorham, 1995)?

This research extends previous literature by investigating how compact designs in automobile and transit societies are associated with elderly mobility. We compare the travel and activity behaviors of people aged 65+ in the U.S. and Japan, the two top fast-aging countries with completely different spatial paradigms. More specifically, the former is known for its extensive automobile-oriented culture with suburban sprawl while the latter has well-developed transit networks featuring compact, walkable, accessible, and mixed-use development. The analysis of older people’s travel and activity behaviors helps understand whether regional and local spatial characteristics matter to elderly mobility, travel burden, and out-of-home activity engagement. We hypothesize that (i) denser and more accessible built environments in transit societies are associated with more mobile and active older adults, but (ii) the influences of compact designs in automobile societies on elderly mobility is modest.

We conduct the analysis for the older adults in the U.S. and Japan based on the 2017 National Household Travel Survey and the 2018 Tokyo Person Trip Survey to examine how urban size, population density, employment density, and access to rail stations influence the tour complexity and tour counts and activity duration by mode and by purpose among the older adults. Our multivariate regressions account for residential self-selection and control for socio-demographic characteristics and health conditions. We find that older people living in denser and more accessible environments in transit societies in Tokyo, Japan tend to conduct more active and transit tours but fewer automobile tours and shorter travel. Moreover, these older adults are more likely to be engaged in social, shopping, and recreational activities. Compared to their counterparts in the U.S., built environments only have limited impacts, but the possession of driver license and household vehicles show greater explanatory power, which could be related to the country’s automobile-oriented culture. Our results suggest that dense and accessible neighborhood designs can enhance older people’s mobility with more out-of-home activities, but the influences of the macro-regional contexts and automobile-oriented culture should be deliberately considered.

Citations


Key Words: Older Adults, Travel-Activity Behaviors, Built Environments, International Comparisons

EFFECTS OF AUTONOMOUS VEHICLES ON EVACUATION EFFICIENCY IN A NO-NOTICE DISASTER
Abstract ID: 59
Individual Paper

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No-notice disasters such as earthquakes and radioactive spills induce considerable disruptions. Issues emerging during evacuation processes encompass traffic congestion, evacuation of vulnerable populations, and noncompliance with established guidelines. The integration of autonomous vehicles holds the potential to mitigate the turmoil associated during evacuations. Features such as shorter distances between cars, faster response times, and car-sharing for vulnerable populations can alleviate some of the challenges of traditional evacuations (Lee, 2021, Al-Turki et al., 2021). However, autonomous vehicles may not consistently exert a positive influence during disaster scenarios (Sivak and Schoettle, 2015). Autonomous vehicles may themselves pose novel risks in disaster contexts, such as traffic signals prioritizing autonomous vehicles due to their “vehicle-to-infrastructure (V2I)” capabilities, or difficulties for human driven vehicles in changing lanes due to short distance between cars. Amid disaster evacuations, unforeseen events such as road damage, V2I network impairments, and subsequent errors might negatively influence the entire evacuation system if the autonomous vehicle fails to adapt. As a result, it is imperative to investigate the possible complexities that autonomous vehicles might provoke during the evacuation process.

This study evaluates the influence of autonomous vehicles on overall evacuation efficiency, premised on a scenario in which autonomous vehicles have become widespread. The primary objective is to identify potential issues stemming from the integration of autonomous vehicles in disaster evacuation situations. To develop an evacuation scenario, we examined evacuation behavior utilizing road network speed and flow data collected during the 2017 Pohang earthquake in South Korea. Subsequently, we verified the effects of introducing autonomous vehicles on road network capacity and stability during disaster evacuations. The study assumed that the proportion of level 3 or higher autonomous vehicles among all vehicles ranged from a minimum of 0% to a maximum of 60%. Additionally, we assessed the impact on road network capacity and reliability, contingent on whether the autonomous vehicles possess “vehicle-to-vehicle (V2V)” communication capabilities and the presence or absence of V2I infrastructure. We then analyzed the consequences of autonomous vehicles in scenarios involving road damage and disconnection due to infrastructure network impairments. The analysis revealed that autonomous vehicles hold the potential to enhance evacuation efficiency, capacity, and safety; however, the impact is dependent on factors such as autonomous vehicle penetration, road infrastructure, and communication networks. The widespread penetration of autonomous vehicles requires time, during which the driving environment will be a mixture of regular and autonomous vehicles. For optimal operation of autonomous vehicles, a high level of vehicular capability and supporting infrastructure must be established. However, even with the requisite infrastructure, disruptions caused by autonomous vehicles may occur during disasters. This study endeavored to pinpoint the potential hazards associated with deploying autonomous vehicles in disaster where such vehicles are prevalent. Implementing these solutions will augment public acceptance of autonomous vehicles, expedite their deployment, and enhance emergency response capabilities.

Citations


Key Words: autonomous vehicle, no-notice disaster, evacuation, simulation

UNCOVERING ELECTRIC VEHICLE OWNERSHIP DISPARITIES WITH UNSUPERVISED MACHINE LEARNING TECHNIQUE
Abstract ID: 64
Individual Paper
Transportation electrification has been widely promoted for its environmental benefits and energy efficiency. However, there are growing transportation equity concerns related to EV adoption, which are linked to the high purchase cost of EVs and other barriers associated with driving them (Adepetu & Keshav, 2017; Hsu & Fingerman, 2021). The majority of EV buyers are yet highly educated, male, high-income individuals who are likely homeowners, own multiple vehicles, and have the ability to install personal home charging stations (Hardman et al., 2021).

The main objective of this study is to identify EV adoption disparities in the southern part of the U.S. to raise awareness of transportation equity concerns related to transportation electrification plans. Our study analyzed EV adoption in Austin. We utilized hot spot analysis to reveal clear spatial patterns in EV adoption and unsupervised machine learning tools, including K-means clustering with cluster evaluations, to uncover hidden spatial patterns. The identified clusters were then subjected to statistical mean difference tests for computation.

The study’s findings are as follows: First, the hot spot analysis revealed a clear spatial gap between East and West Austin regarding EV registration. The hot spots with higher EV registration had a greater proportion of the White alone population and higher income levels than the cold spots with relatively lower EV registration. Second, the K-means clustering analysis, which combined multiple factors, revealed a hidden spatial disparity with three types of clusters. The disparity was evident between East and West Austin, and there were also differences within West Austin. Third, the One-Way ANOVA and Tuckey’s HSD confirmed the statistical difference between the three types of clusters.

In West Austin, there was a cluster with a high EV registration rate composed of a greater proportion of the White alone population, high income and education levels, and ownership of multiple vehicles. Notably, this cluster had more SF housing units and open space land use but was also projected to consume greater site energy. Conversely, East Austin had a lower EV registration rate with a higher proportion of African-American and Hispanic alone population, who are likely to be young (between the ages of 18 and 34), less educated, and do not own a vehicle or only have one. A prominent portion of MF housing units and land use was located in this cluster.

The fact that the clusters of disadvantaged communities identified in this study mainly reside in MF housing units is worth noting because residents living in SF housing units are more likely to own EVs (Peterson, 2011). Fortunately, our study found no statistically significant differences in the distribution of public EV chargers, suggesting that they are allocated relatively equally. However, it should be noted that simply installing more chargers does not guarantee better access to them, as the notion of availability varies. Moreover, the relatively high cost of purchasing an EV and the ability to install personal charging options (Peterson, 2011; Harman et al., 2021) could be a barrier to disadvantaged communities. Addressing this issue will require finding ways to alleviate the capital cost, especially as real income fails to keep up with significant inflation.

Policymakers must recognize the caveats before promoting EV adoption. The cost of EV ownership must consider not only the purchase price but also the management cost and the ability to recover those costs (Peterson, 2011). In this regard, society-centric approaches like participatory budgeting, community-led analysis, and community mobilization, in addition to conventional state-centric approaches like agency-led analysis and public hearings, are worth considering (Karner et al., 2020). Regardless of the approach, the reluctance to purchase EVs in disadvantaged communities must be addressed.

Citations

Key Words: Electric Vehicle, Transportation Equity, Machine Learning, Clustering

NAVIGATING PRECARIOUS CAR OWNERSHIP IN THE US
Abstract ID: 103
Individual Paper

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For most low-income households in the United States, owning a car is an expensive necessity. Access to a vehicle enables greater accessibility to jobs and other opportunities than public transit, walking, and cycling. But owning and maintaining a car can be a significant economic burden. Many low-income households struggle to buy and maintain cars and, as a result, frequently transition into and out of car ownership.

This research focuses on the experiences of low-income households navigating forced car ownership in America. Through interviews with adults in rural, suburban, and urban contexts, I examine the four central aspects of the car ownership experience. First, I examine how and where households acquire cars. Second, I discuss interviewees’ experiences owning, maintaining, and paying for cars. Low-income households are more likely to purchase used vehicles, which are less reliable and require frequent and often expensive maintenance to keep the cars running. Thirdly, I examine the experiences and consequences of losing access to a car for these households. Finally, we explore how low-income households make sense of the trade-offs of increased spatial access with the costs of car ownership.

Citations


Key Words: precarity, car ownership, transportation

DOES POPULATION ACCESSIBILITY SHAPE TOD-NESS? A CASE STUDY OF SHENZHEN, CHINA BASED ON BIG AND/OR OPEN DATA
As an overarching policy and development model, Transit-oriented Development (TOD) is widely used to promote the integration of land use and transit services, which arguably bring about benefits such as reduced car dependence, increased transit usage and improved community cohesion. Metro station areas (MSAs), i.e., areas within a reasonable walking distance to a metro station have been paid special attention by TOD advocates. To TOD advocates, well-planned MSAs should have TOD-ness characteristics concerning various Ds, e.g., destination, density, diversity, and design. In the existing scholarship, however, little has been done on TOD-ness’ “consumers”, the population who can reach an MSA within a reasonable travel time. With the help of big and/or open data, we empirically examine whether and to what degree the population accessibility of an MSA cluster (MSAC), a set of MSAs within t minutes’ metro ride from a metro station is correlated to that MSAC’s TOD-ness in Shenzhen, China, a fast-growing city known for master-planned developments and TOD. We measure the accessibility by the daytime/nighttime population in the same MSAC. We define TOD-ness as the average extent to which all the MSAs in an MSAC meet agreed-upon three D characteristics: Density, Diversity, and Design. Coefficient of geography association, Gini index, pairwise correlation, and linear regression analyses are carried out. We find that the accessibility in one period can significantly predict both MSA and MSAC-level TOD-ness in ensuing periods. However, the accessibility’s impacts on TOD-ness decrease or even disappear over time. Besides, station (area) characteristics such as jurisdiction membership can significantly predict the overall TOD-ness and three Ds after controlling for the accessibility. Our study thus sheds new light on the MSAC-level TOD policy and planning evaluation.

Citations


Key Words: Transit-oriented Development, Metro Area Cluster, Accessibility, TOD-ness, Shenzhen

AFTER THE MINIMUM PARKING REQUIREMENT: PARKING REFORM IN A SMALL CITY

Abstract ID: 107

Individual Paper

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Minimum Parking Requirements (MPRs) have faced criticism for generating excess parking, degrading urban form, negatively impacting housing affordability, and encouraging automobile dependency. In response to the many problems caused by MPRs, over 200 American cities have reduced or removed parking minimums in some or all areas during the last decade or so. Empirical research that highlights the benefits of parking reforms can help further spread innovative parking solutions across the country. However, existing US-based research is limited to large city cases and to an analysis of changes in parking supply (Gabbe et al., 2020; Hess & Rehler, 2021; Manville, 2013). This study investigates the broader benefits of parking reform in a small Midwestern city, Champaign, IL. In 2015-16, the city of Champaign selectively removed MPRs for its downtown and university districts that form its urban core. This targeted removal of MPRs offers an ideal quasi-experimental setup to examine the effects of such
a policy change in a small city. We obtained the building permit dataset from 2009 to 2022 – seven years before and seven years after the reform – covering the entire city (n = 153) to analyze the impact. While our main analysis is quantitative, we also supplement our findings with interviews of four developers, one architect, and one planner.

The construction of on-site parking in the deregulated zones dramatically decreased from 108% of the earlier requirement to only 46% after the reform, clearly indicating that MPRs had enforced an oversupply of parking in the student-dominated districts. In the seven-year period following the parking reform, 84% of the 43 new major developments, including eight with zero parking, built less parking than what would have been required without the reform. T-test and regression analysis results confirm that these changes in parking supply are statistically significant. Collectively, developers avoided constructing 2,142 parking spaces, saving approximately $43 to $49 million in construction costs. As suggested by interviewed developers, the benefits of reduced parking are being shared with tenants through lowered rents and/or improved product quality. The reduced parking supply in new developments also led to more efficient utilization of existing parking stock, both public and private. Long-term permit sales and revenue data for city-owned parking lots show upward trend starting around one year after the parking reform. In the private sector, developers report sharing parking spaces between older properties with excess capacity and new developments with limited or no parking.

There were significant changes in urban form also. Post-reform developments in deregulated zones have a 31% higher unit density per floor area. Additionally, these new developments are more likely to feature active frontages on the ground floor, with residential, retail, or recreational spaces replacing parking. The increased density and improved urban design are associated with reduced on-site parking supply – developments with fewer or no parking spaces exhibit higher density and a greater likelihood of having active frontages compared to those with more parking availability.

At the regional level, a more significant concentration of development is observed in the already walkable and transit-friendly deregulated zone. While the removal of MPRs is not the sole determining cause, we conclude that it acted as a catalyst. Thanks to the more concentrated growth, the university district has successfully maintained bus ridership despite the region-wide ridership decline since its 2015 peak.

Broader policy implications of a targeted and incremental parking reform, takeaways for other cities, and directions for future research are discussed in the end.

Citations


Key Words: Minimum parking requirements, Parking reform, Parking, Quasi-experimental research, Urban Development

GETTING QUALITATIVE RESEARCH PUBLISHED IN TRANSPORTATION: REVIEWER #2 AND METHODOLOGICAL GATEKEEPING
Abstract ID: 109
Individual Paper

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Researchers have long established that disciplinary norms shape knowledge production, but the structure and influence of disciplinary traditions have received limited attention in transportation scholarship. Peer review is one central mechanism that reproduces disciplinary norms, establishes valid fields of interest, and shapes scholars’ opportunities for advancing. In fields with methodological orientations towards quantitative knowledge, peer review could systematically reproduce the valuation of some topics and methods over others. In transportation, quantitative methods are emphasized, and social dimensions have received less attention.

Our study examines how qualitative research is assessed in the peer review process of transportation journals. We will base our findings from the broader literature on peer review and semi-structured interviews with qualitative researchers and transportation journal editors. We expect methodological bias and training might shape peer review and how editors treat reviews and manuscripts. Our objective is not just to learn about peer review but how experiences with peer review shape research agendas, careers, and the field of knowledge in transportation. While focused on transportation planning, these discussions will be instructive for broader conversations about sub-disciplines and traditions in the production of urban planning knowledge more generally.

*Author order is reverse alphabetical order after presenting author.

Citations


Key Words: transportation, research methods, qualitative methods, undone science

BRUSHING SHOULDERS: IN-TRANSIT SOCIAL INTERACTIONS AND INTERSECTING IDENTITIES IN LOS ANGELES & DETROIT

Abstract ID: 149

Individual Paper

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Public transit is meant to provide basic mobility for the disadvantaged and to serve broader social and environmental goals in the metropolitan areas of the United States. It is thus a means to achieve the objectives of the community and urban planners, alike. Public transit is also often considered to have external or hard to quantify benefits that add value beyond the service provided and the passengers attracted—for example, functioning in a way that is like public space.

William H. Whyte presented us with details of the way public space in New York City functioned, as he described the social interactions that occurred between people in space. He witnessed that individuals’ behavior will often
follow the form of peers (Whyte, 1980). Further, the concepts of ‘copresence’ and ‘unfocused interactions’ describe the types of social interactions in public space outside of those involving physical touch and conversation (Goffman, 2008). It is argued that the concept of “everyday space” can function as a connective tissue that binds the daily lives of people together by fostering new forms of social interaction and potentially taking society closer to physical and social equality (Bravo & Crawford, 2012). Few examples, however, have attempted to theorize that public transit also acts as public space.

The purpose of this research is to show how the functions of and interactions within public space may also occur on public transit, and thus, that public transit functions like a public space. Further, I examine how the interactions happening within transit vehicles, and my own vehicle, may provide a social value that is not yet considered. The nature of the way public transit operates, “with people from diverse backgrounds,” riders are “bound to come into visual or physical contact with others... The transit vehicle, then, presents people with a unique space for practicing being a stranger (Ocejo & Tonnelat, 2012).” With this research, I seek to understand the value of social interactions along public transit and answer the research question—does public transit act as a mechanism or tool for social mixing?

It was not the intent, however, to include experiences of driving Lyft in this research as well. Over 19 days from December 2022 to March 2023, I completed 268 trips driving Lyft in Metro Detroit. I used an ethnographic approach to interact with the riders through natural conversation and by finding common ground. Utilizing Lyft as a supplement to this transit research brings additional opportunities to engage with the community (or “gatekeepers” of public transit) and a greater understanding of the transportation ecosystem.

A mixed methods approach is used which includes participant observation and interviews (ethnography), demographic and socioeconomic analysis for key transit routes, and collection of field data using a determined list of interaction typologies. Building from previous examples of ethnography that looked for a greater understanding of the interactions within public space, I consider the unobtrusive moments and social interactions that occur while riding transit along corridors that extend through and across geographies of diverse populations.

The findings to date include observations of key interactions along urban and suburban Detroit bus routes and LA Metro’s Route 16 and Purple/Expo Lines. There are common ‘typologies’ of the interactions that happen between riders and between the riders and the participant observer, myself—categorized as Conversation Starters, Sharing Space, and Solitary Tools, and further into fourteen sub-typologies.

A discussion of the relationship between public space, public transit, and the social interactions within them, results of route observations in Detroit and Los Angeles through Summer 2023, and key reflections and conclusions of these observations will be included in the final paper.

Citations


Key Words: Public Transit, Public Space, Interactions, Ethnography, Lyft

VIEWS AND VALUES OF ELECTED OFFICIALS ON TRANSPORTATION EQUITY

Abstract ID: 150

Individual Paper
Despite decades of research on transportation equity, there has been comparatively little research into the values, experiences, and understandings of elected officials. Arguably, the distribution of transportation benefits is mediated through elected officials, who may be instrumental in framing the goals and priorities of these investments (Hay & Trinder, 1991; Taylor, Kim, & Gahbauer, 2009). Scholars have demonstrated differences in priorities between politicians and transportation experts (Cohen-Blankshtain, 2021), noting that elected officials can be instrumental to the success or failure of equity-focused policies (Wellman, 2016). Despite this, there is relatively little known about how elected officials view or understand transportation equity, particularly in the Canadian context.

This research used a mixed-method approach, drawing on a national survey (n = 165) and in-depth interviews (n = 38) with elected officials to better understand their views and experiences with transportation equity. We address the following research questions: (1) What values and knowledge do municipal councillors have about transportation equity? (2) What types of personal experience do municipal councillors have with transportation barriers? and (3) What types of expertise do elected officials draw on to understand transportation barriers?

Our findings show that elected officials have divergent values related to transportation equity, which in some cases conflict with the dominant academic discourses. Critically, there was little support for policies that benefit marginalized people and communities, rather than benefits to the greatest number of people. While results vary by community size, we found that for elected officials who have personal experiences with transportation barriers, these were most commonly related to poor transit service rather than affordability or membership of an equity-deserving group. We also find that elected officials rely on information from both professional staff and constituents to understand transportation barriers in their communities, pointing to the role of planners and public engagement processes in more equitable transportation decision-making.

Citations


Key Words: transportation equity, elected officials, municipal councillors, mixed methods

DETERMINANTS OF TRANSIT RIDERSHIP IN THE US FROM 2019 TO 2021: COMPLEMENTARY EVIDENCE FROM INFERENTIAL AND MACHINE LEARNING METHODS

Abstract ID: 156

Individual Paper

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Most existing studies have focused on the impact of demographic factors, as well as COVID-19 cases (or infection rate) on public transit ridership in the early phase of the COVID-19 pandemic for a single type of public transit system. There are a few studies that have used a longitudinal approach to identify the most important determinants of transit ridership for a few years before the pandemic, but they have not considered recent trends and patterns in transit ridership due to COVID-19. There is no consensus on recent patterns in transit ridership as most previous studies focus on pre-pandemic years (before 2018) or focus more on social-economic factors during the pandemic.

Understanding the reasons behind recent patterns in ridership is important for a wide range of applications, including predicting transit ridership in a pandemic or disruptive situation, designing coping strategies for similar disruptions in the future, and providing sustainable and effective policies to help agencies recover from the pandemic and increase ridership in the long run. Therefore, this study seeks to shed light on transit ridership trends in recent years, from 2019 to 2021, according to the availability of data by addressing the following questions: (i) What are the primary determinants that have contributed to overall transit ridership (all modes) in pandemic impacted years? (ii) How does the contribution of key determinants and factors in predicting the ridership vary over time (e.g., during the pandemic vs recovery time), and transit modes (e.g., rail vs bus)? (iii) How can transit ridership recover to pre-pandemic levels for each mode? To answer the research questions, we employ a Machine Learning (ML) approach (i.e., random forest), and inferential method (Multilevel Linear Modeling (MLM)), to investigate the relationships between public transit ridership and key internal and external factors in 35 Metropolitan Statistical Areas (MSAs) in the US.

We consider two steps to analyze ridership patterns in recent years, which enables us to investigate complex relationships between ridership and key determinants from 2019 to 2021. In the first step, we focus on the last three years as a continuous period and investigate the relationship between key determinants and overall transit ridership (i.e., bus, heavy rail, light rail, commuter rail, and trolley bus). In the second step, we separate recent years into three phases, including before the pandemic, during the pandemic, and recovery time, and then evaluate the key determinants and factors that can contribute to transit ridership.

The results show that among several key determinants, Vehicle revenue miles (VRM), COVID-19 index, the share of the minority group of people, gasoline price, fare and polycentric development are significantly associated with total transit ridership (for all modes). But this relationship is not always linear. In addition, the results reveal that both bus and rail transit ridership is sensitive to the COVID-19 pandemic, but fully vaccinated rate is not a significant factor in recovery time. Also, while the macroeconomic factor is the most important contributor in predicting rail and bus ridership during the pandemic, that of recovery time is transit services. We suggest that public transit agencies should consider gasoline prices, the rate of unemployment, the rate of telecommunication, and the rate of fully vaccinated people as signals to adjust their policies to respond to public transit demand in similar health crises, and recovery time. Also, urban and transportation planning strategies, which improve polycentric development, are recommended to control such disease outbreaks effectively and sustainably in compact cities and reduce the recovery time for transit ridership.

Citations

EXAMINING THE FEASIBILITY OF USING TRANSPORTATION UTILITY FEE TO FUND TRANSIT

Abstract ID: 158

Individual Paper

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Planning issue: A transportation utility fee (TUF) is based on the principle that transportation is a utility like water (FHWA, 2018); therefore, transport users should pay for it like they pay utility charges. Thus, jurisdictions impose TUF directly on transport users who live in or use new as well as existing properties. The fee is payable regularly, for example, monthly (Turley, 2014).

While the use of TUF is still modest, it has grown in the last two decades from 10 jurisdictions across two states (Ewing, 1993) to over 30 jurisdictions across multiple states by the mid-2010s (League of Oregon Cities, 2015; Voulgaris, 2016). Indeed, research conducted for this project identified close to 100 jurisdictions that use some variant of TUF.

Jurisdictions primarily use TUFs to fund a portion of auto-oriented transportation infrastructure, not transit. Furthermore, fees are politically more acceptable than taxes. Indeed, the biggest challenge to using a TUF is to prove that it is a fee, not a tax. In four instances, state supreme courts struck down TUFs, ruling that they are a tax (Voulgaris, 2016); and the Florida State Supreme Court ruled TUF unconstitutional because, among other reasons, the state statutes did not authorize it. Therefore, great attention must be devoted to a TUF’s basis, design, and calculation methodology to ensure it qualifies as a fee and state statutes authorize it.

Methodology: This study answers three research questions through a review of extant literature and an in-depth study of six TUF programs. First, what is the extent to which TUFs are used to fund transit in the US? Second, what factors (e.g., enabling legal environment and stakeholder support) allow case study jurisdictions to use TUF to fund transit? Third, in which specific ways does TUF support transit in the case study jurisdictions?

Findings: Three main findings emerge. First, jurisdictions rarely use TUF to fund transit. Of the 98 TUF programs identified in this research, TUF funds transit in only six cases.

Second, several factors enable the case study jurisdictions to use TUF to fund transit. First, it helps when the state laws grant broad powers to local jurisdictions to levy fees and taxes, as in Oregon, South Carolina, and Wisconsin. Second, as in Montana, explicit permission to use TUF-like fees also helps. Third, at the local level, it helps if the authorizing ordinances and policies explicitly allow jurisdictions to use TUF revenues to fund transit, as in Hillsboro, OR, Richland County, NC, and Weston, WI.

Third, the case study jurisdictions support transit in several ways that are influenced by three interrelated factors—the amount of fee revenue, whether a portion of the revenue is earmarked for transit, and whether the jurisdiction provides transit service. For example, while Weston explicitly allows the fee to fund transit, the jurisdiction’s TUF revenues are inadequate in amount to support it. In the case of Corvallis, OR, TUF was explicitly created to fund transit. However, due to the limited revenue, it only funds operations and maintenance, not capital needs. However, Corvallis has leveraged its fee revenue to garner federal transit funds. Finally, despite limited TUF revenue, Hillsboro, OR, and Helena, MT, can fund transit because they require a portion of the revenue to finance it—25% and 10%, respectively.
Relevance and implications for planning scholarship and practice: By examining the use of TUF to fund transit, this paper contributes to the literature on TUF and, more broadly, transit finance. Specifically, as more jurisdictions adopt TUF programs and governments across all levels explore ways to fund transit, this research will help them make better-informed decisions.

Citations


Key Words: Transportation, Transit, Transportation Finance, Transit Finance, Infrastructure Finance

EXPLORING INEQUITY IN PEDESTRIAN AND BICYCLE SAFETY: A COMMUNITY LEVEL STUDY IN FLORIDA

Abstract ID: 168
Individual Paper

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Background: Pedestrians and bicyclists are vulnerable roadway users and have had an increasing fatality and injury rate in recent years. When involved in traffic crashes, they are highly likely to get severe injuries or even lose their lives. Nationally, the annual number of fatalities exceeds 6,000 for pedestrians and 1,000 for bicyclists, and these numbers have been on the rise for several decades.

Problem: Recent studies have uncovered that among all fatalities and injuries, pedestrians and bicyclists in lower-income communities have a higher crash and injury rate compared to higher-income communities. Individuals who walk or cycle in lower-income areas face a more severe safety risk on the roadways than in higher-income areas.

Despite this situation, understanding the underlying safety differences of areas with disparity in income have not been fully investigated. Florida is the third largest state in the US and has a long history of pedestrian and bicyclist safety concerns. Although there is a big difference in income levels among various neighborhoods, there have been only a few studies of pedestrian safety disparities in Florida. To fully understand the safety disparities between communities of different income levels, this study investigates the factors behind this uneven distribution of pedestrian and bicyclist crashes.

Methods: The study analyzed the safety outcomes for pedestrians and bicyclists and developed four sets of spatial regression models at the blockgroup scale. We analyzed pedestrians and bicyclists separately and created different models for all crashes versus fatal and injury crashes and compared the significant risk factors identified by the models for higher and lower income blockgroups.

Results: The findings highlight the significance of various risk factors such as traffic volumes, roadway speed, infrastructure like intersections and bus stops, and socioeconomic characteristics such as employment status. Interestingly, higher-speed roads have a higher impact on crashes in lower-income neighborhoods compared to
the higher-income neighborhoods. A higher number of senior population is associated with a higher number of crashes in higher-income neighborhoods but with a smaller number of crashes in lower-income neighborhoods. Additionally, a safety-in-numbers effect was also discovered related to the pedestrian and bicycle crashes - more people walking and/or cycling is associated with fewer crashes.

Contribution: This study contributes to the evidence of safety inequity in both pedestrian and bicycle models. Policy makers in transportation and land use planning should consider further studies and increased safety improvement efforts in low-income neighborhoods.

Citations


Key Words: Pedestrian crash, bicycle crash, income disparity, safety inequity, spatial regression model

COMPLEMENTS OR COMPETITORS? EQUITY IMPLICATIONS OF TAXIS AND RIDE-HAIL USE IN CHICAGO
Abstract ID: 173
Individual Paper

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Taxis have historically served an important role in providing car access to travelers without cars. However, both media reports and academic research have repeatedly documented issues in taxi service, such as racial discrimination (Brown, 2019; Wrigley, 2013), refusal to serve particular geographies (SFMTA, 2013), and poor or unreliable service quality (Brown & Lavalle, 2021). With the advent of information communication technologies, alternative car access services, such as ride-hailing platforms like Uber and Lyft, may present new avenues for car access. Yet ride-hail services are not easily accessible for those without smartphones or bank accounts. Limited research on taxi fare payments suggests that cash fares continue to play an important role in car access, particularly in areas with high rates of immigrant and unbanked residents (King & Saldarriaga, 2018).

This study compares spatial-temporal distributions of taxi and ride-hail services—and the role of cash fares—in Chicago before and after COVID-19. Specifically, we ask three research questions: 1) What are the spatial-temporal distributions of ride-hail and taxi trips in Chicago? 2) Does ride-hail service fill the gap in taxi service? And 3) what role do taxi cash payments play following the implementation of ride-hail services? To answer these questions, we analyzed trip-level ride-hail and taxi data from Chicago in 2014 and 2019-2021. We conducted spatial-temporal analyses and bivariate local Moran’s I to compare taxi and ride-hail trips and the share of taxi trips paid for in cash across three periods. Finally, we employed linear regression models to examine how ride-hail trips and other community-level factors relate to the share of taxi trips paid in cash.
Our findings indicate similar service areas, temporal patterns (2014 taxi vs. 2019 ride-hail trips), trip distances, and travel times across the two modes. However, ride-hail services may, directly and indirectly, fill gaps in taxi services. Ride-hail might directly meet latent demand for trip-based car access and indirectly compel taxi drivers to address their own service gaps through increased competition. Furthermore, taxis appear to increasingly cater to cash-paying customers. Population density and the proportion of non-white and older adults are positively related to the share of trips paid in cash, while the number of ride-hail trips is negatively associated with the percentage of cash payments. Planners should consider the dynamic interactions between taxi and ride-hail services and the role of cash payments to ensure access to opportunities for individuals without car ownership.

Citations


Key Words: Taxi, Cash fare, Equity, Ride-hail, Transportation network company

LONG COMMUTES, WORK-LIFE BALANCE, AND WELL-BEING: A MIXED-METHODS STUDY OF HONG KONG’S NEW-TOWN RESIDENTS

Abstract ID: 183

Individual Paper

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The development of new towns has been considered a key strategy for decentralizing growing populations in urban centers while mitigating urban problems (Hall, 2014). With roots in the “garden cities” envisioned by Ebenezer Howard and the English New Town Movement (Hall, 2014; Forsyth, 2019), establishing self-contained communities has been considered among the core goals of new town development (Cervero, 1995). Unfortunately, enshrining adequate job opportunities in new towns is often not sufficiently prioritized or is difficult to achieve in new town planning practices (He et al., 2020).

This study examines the cascading effects of long commutes on the work-life balance and subjective well-being of commuters from Hong Kong’s new towns. We collected first-hand data using a questionnaire survey and in-depth interviews with residents from urban and new-town areas in 2020. For the quantitative analysis, we built a structural equation model to examine the effects of commute duration on WLB and SWB and compare the differences between urban and new-town residents. We found that longer commute duration was indeed associated with living in new towns, which exerted indirect negative effects on the work-life balance and subjective well-being of commuters via its impact on travel satisfaction. For the qualitative analysis, we used
thematic analysis methods to further disclose the perceived pros and cons of living in new towns for commuters. We found that although new town dwellers tended to be dissatisfied with long commutes, they were compensated by other quality-of-life aspects, including better living conditions and proximity to open space.

Some implications can be derived to inform the spatial planning of Hong Kong and potentially other similar urban contexts. First, our study again cautions against new town planning that overlooks promoting the balance between jobs and housing and local economy agglomeration, even within high-density contexts. Second, our study has associated longer commutes with lower housing prices in a way that represents vulnerable social strata, which basically aligns with the findings of certain previous studies (e.g., Grengs, 2010). The lack of access to other public facilities remains a major challenge for some remote new towns. Hence, establishing high-quality public amenities and cultural venues in new towns could reduce the need for long-distance travel for non-commuting trips. Finally, the current study provides a framework that can be utilized to assess the social impacts of other new town projects and new development areas, helping to better incorporate consideration of enhancing quality of life into spatial planning.

Citations


Key Words: New town, commute, work–life balance, well-being, mixed methods

ECOSYSTEM SERVICES TRADE-OFFS OF LARGE-SCALE ROADSIDE TREE REMOVAL IN COASTAL GEORGIA

Abstract ID: 195

Individual Paper

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In 2017, the Georgia Department of Transportation (GDOT) began a new tree removal program, clear-cutting trees on all highway agency property across the state (Hurt, 2018). Public outcry was particularly strong in the Savannah region, the heart of coastal tourism in Georgia.

Far from an isolated case, large-scale roadside tree removal is fairly common across the country. Since 2015, for example, public outcry against tree clearing along highways has been documented in parts of California, Connecticut, Florida, Maine, Pennsylvania, and South Carolina. These actions are often classified as maintenance projects, which carry no requirements for public input or environmental review. Among many other ecosystem services provided, roadside trees are an important source of carbon sequestration and storage in the US (Ament et al., 2014; FHWA and Volpe, 2010). As justification for roadside tree clearing, highway agencies often cite safety, pointing to the potential for run-off-the-road crashes with trees. While the idea of a roadside “clear zone” has been maintained as an absolute rule of engineering for over 50 years, its relationship to road safety is still unclear (AASHTO, 2011; Wolf & Bratton, 2006).
In this study, we address the following research questions: What were the ecosystem services impacts of large-scale roadside tree removal along the I-16 corridor in Georgia? Did tree crash fatalities along the corridor decrease as a result of clearing the trees?

Using the USDA Farm Service Agency’s National Agriculture Imagery Program (NAIP) one-meter imagery and the Normalized Difference Vegetation Index (NDVI) in ArcGIS, we analyzed the before and after tree canopy cover along the I-16 corridor in Georgia. We quantified the acreage of cleared land and calculated the change in carbon storage and carbon sequestration ecosystem services resulting from the reduction in roadside forests. We also utilized GDOT crash data to assess tree crash fatalities before and after the tree removal program was implemented.

Results are anticipated to show a loss of ecosystem services along this corridor, with potential impacts to carbon storage and carbon sequestration. Results are also anticipated to illustrate that large-scale roadside tree removal, as a stand-alone action, does not eliminate tree crash fatalities. We seek to demonstrate that the framework of ecosystem services can be used as a tool for decision-making within departments of transportation, even if formal environmental reviews are not taking place.

Citations


Key Words: trees, ecosystem services, transportation policy, roadside safety, aerial imagery

TRIP PATTERNS OF SHARED ELECTRIC BIKES IN NEW YORK CITY
Abstract ID: 199
Individual Paper

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E-bikes offer several unique advantages over classic bikes, including higher speed and less required effort. They have also been found to be a popular substitute for other modes of transportation (Bigazzi and Wong, 2020), and to generate more diverse trips than classic bikes (Langford et al., 2013; Popovich et al., 2014). Shared e-bikes combine the advantages of both e-bikes and bikesharing, offering users new travel experiences. In the United States, researchers have found that shared e-bikes are used for longer trips, non-commuting trips, and trips with a broader range of purposes than classic shared bikes (Langford et al., 2013; He et al., 2019). However, these studies were conducted in smaller-scale bikesharing systems and in unique contexts, such as on a university campus or in a tourist city. Thus, it remains unclear how the use of shared e-bikes compares to classic bikes in larger-scale.
bikesharing systems like CitBike in New York City.

Citibike NYC, which was launched in 2013, has grown to become the largest bikesharing system in the United States. A number of studies have analyzed bikesharing usage of Citibike riders. Researchers have revealed that factors such as population density, land use, bike-related infrastructure, and subway ridership are associated with trip patterns of shared bikes in New York City (Noland, Smart, & Guo, 2016; Noland, Smart, & Guo, 2019). Additionally, trip patterns have been found to vary by membership status, peak hours, and weekdays. While Citibike NYC added electric bikes to its fleet in 2018, no studies to date have examined the travel patterns of these e-bikes.

This study seeks to contribute to the existing literature by investigating the trip patterns of electric shared bicycles operated by CitiBike NYC. The research aims to address two primary questions: 1) How do electric bikes differ from classic bikes in terms of trip distribution and patterns generated by members and casual users? 2) Are there any distinct associations between electric bike trips and land use and demographics, such as age, race, income, and education level, as compared to classic bikes?

To address these questions, I downloaded several months of trip data from the CitiBike website and aggregated the trip counts by station. Using spatial analysis, I created service areas for each shared bike station and integrated land use and census data. I conducted descriptive analysis to compare trip patterns between electric bikes and classic bikes, and between different user types. Additionally, I will use regression analysis to explore the difference in trip generation between e-bikes and classic bikes and associations with land use, infrastructure and demographics.

This study will enhance our understanding of how electric bikes are changing the trip patterns of shared bikes in New York City, which can provide useful insights for both the bikesharing operator and planning authorities to improve the city’s transportation system.

Citations


Key Words: bikeshare, electric bikes, trip patterns, land use

RIDING WITH STRANGERS: INFORMALITY AND UNCERTAINTY IN DIGITAL RIDESHARING

Abstract ID: 205
Individual Paper

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In this paper, I consider informal practices of sharing out, in which people share vehicles with members outside of their social networks. U.S. residents frequently travel by sharing in, such as by carpooling with family members (Blumenberg & Smart, 2010). Yet travelers also share frequently vehicles with strangers. Examples of vehicle-sharing with strangers include (1) riding public transit, (2) using taxi/ridehail and carshare services, and (3) forming casual carpools and ridesharing (Shaheen & Cohen, 2020). While the first two categories are mediated by external parties – including public transit agencies and private companies – travelers in the third category must coordinate exchanges themselves, thus engaging in informal sharing (Mote & Whitestone, 2011). Yet limited research addresses how informal sharing – and ridesharing in particular – can meet the travel needs of U.S. residents.

Though travelers do not share vehicles with strangers as often as they share with acquaintances, informal sharing out is critical for scholars of transportation equity to study. First, studying informal sharing out may illuminate unmet travel needs and inform strategies to improve formal practices of sharing. Second, it provides insight into the role transportation inequity plays in the choice to share. People who experience transportation disadvantage – including travel-limiting medical conditions, poverty, and limited automobile access – are more likely to receive transportation resources – for example, by getting rides from non-household members (FHWA, 2017). Constraints may similarly motivate people to give or receive resources from strangers, and these exchanges could be especially valuable for disadvantaged travelers. Finally, studying informal ridesharing provides insight into how people navigate complex social environments and manage risk by requesting and providing information. These dynamics could similarly mitigate or exacerbate sociospatial inequality.

Due to the difficulty of gathering data on informal sharing out, I use the case study of posts on the Craigslist rideshare board. With these data, I evaluate how travelers present themselves and communicate their needs when seeking to share with strangers. Among other factors, I emphasize differences between people who offer and request shared rides, as well as differences between those who engage in primarily commercial versus noncommercial transactions. After scraping data from rideshare posts for eight California cities/regions, I conduct a quantitative analysis of word frequency via text mining. I also use qualitative content analysis to identify themes and patterns in posts. I find that most posts on Craigslist list intercity trips, although this varies by whether people are posting commercial versus noncommercial trips. While many people share due to financial motivations, others highlight the importance of opportunities to socialize. Yet social and financial motives to share are not always mutually exclusive. Additionally, many posters mention safety as a barrier to sharing with strangers in ridesharing. Some posters volunteer personal information to overcome these concerns.

These findings suggest that policies to increase vehicle-sharing among strangers – for example, formal carpooling programs – might consider incorporating demographic information when matching users. Frequent posting of certain routes could suggest that new services could fill gaps in the transportation infrastructure, for both intercity travel and intracity travel in smaller towns and cities. Finally, the psychological burdens of sharing with strangers appear to fall disproportionately on women. In addressing these, transportation policies should consider the unique challenges women face in travel. These may include policies extending to formal services like public transit.

Citations

Key Words: transportation equity, ridesharing, hitchhiking, informal travel, platform economy

ACTIVE TRAVEL AMONG OLDER ADULTS IN SUBURBAN CONTEXTS: A MIXED-METHODS APPROACH

Abstract ID: 207
Individual Paper

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The World Health Organization (WHO) determined the features of age-friendly cities in eight domains of urban life: outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services (Plouffe & Kalache, 2010). Therefore, mobility plays a fundamental role in contributing to elderly’s wellbeing, mainly supporting active mobility, which is an essential component of public health policy and a key mechanism for reducing the burden of physical and mental health conditions in later life (Cunningham et al., 2020).

Our recent systematic scoping review (Voorheis et al., 2023) suggests that providing social support, delivering tailored prompts and cues, and restructuring the built environment are critical intervention strategies to promote active transport among older adults. In addition, our findings indicated that qualitative and mixed methods were under-utilized to understand why and how older adults engage in active travel.

This paper builds on our previous work to answer two research questions: (i) which characteristics influence active travel among older adults? and (ii) what are the barriers and facilitators to active travel among older adults? To answer these questions, our study uses a sequential mixed-methods approach. Our quantitative stage uses a survey sample of 260 adults 55 and older in Scarborough, Ontario. We used descriptive statistics and logistic regression models to study the factors correlated with the use of active transport and the increase in active travel since the onset of COVID-19. These results and themes from our systematic scoping review inform our qualitative interview data study among older adults in Scarborough, Ontario, which aims to understand their personal experiences, perceptions, needs, and desires regarding active transportation support and exercise opportunities in their local community. We used Scarborough as a case study, a suburban car-oriented area within the City of Toronto with 62% senior and youth dependents (City of Toronto, 2018). Nearly 25% of households do not own a car, but only 7% of the trips are made by walking or cycling, compared to 27% in Toronto and East York (TCAT, 2018).

We found that bicycle ownership, motivation, convenience, and necessity are positive and statistically significant factors influencing active travel behavior. Conversely, income, perception of COVID risk in public transport, and a perceived lack of skills are negative factors. Additionally, the increase in active travel since the onset of COVID was positively influenced by being encouraged by health and fitness reasons, social relations, and the need to get groceries and negatively impacted by not feeling capable of doing active travel. Surprisingly, no sociodemographic characteristics were statistically significant in both models.

We compare those who did active travel versus those who did not, exploring the most significant barriers affecting this behavior. Our results show that non-active travelers are 35 times more likely to experience low motivation for active travel, 26 times more likely to feel they don’t have the skills to active travel, and 14 times more likely to feel incapable of active traveling. In the coming months (April to June), we expect to dive deep into these preliminary results in our ready-to-apply qualitative interviews. The results of the qualitative interview data will be analyzed deductively using the Theoretical Domains Framework (TDF), deployed in our previous work (Voorheis et al., 2023).

The results from these mixed-method study will help to identify, understand and categorize the determinants that
must be addressed in future interventions to support the uptake of active transportation in car-dependent Scarborough. These interventions may contribute to simultaneously address the social and environmental dimensions of sustainability by promoting cleaner transport modes and improving elderlies’ wellbeing.

Citations


Key Words: age-friendly cities, active travel, older adults, mixed-methods, behavioral science

USING DISAGGREGATE VEHICLE DATA TO INVESTIGATE HOW RIDE-HAILING SERVICES INFLUENCE AUTO USE ACROSS A METROPOLITAN REGION

Abstract ID: 208

Individual Paper

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App-based ride-hailing has become a popular form of urban transportation. Previous research suggests that it may in some cases enable lower reliance on private vehicles, but that it is also associated with increases in congestion and vehicle miles traveled (VMT). We examined how introduction of the Uber ride-hailing service in the Boston area related to changes in the average daily VMT of individual vehicles. This research is unique because it focuses on the use patterns of individual automobiles instead of relying on aggregate measures of auto use, or estimates based on surveys, as done in previous research. Using data sourced from vehicle registrations and odometer readings collected during state-mandated annual inspections, we tracked changes to the average daily VMT of 1,873,996 vehicles over five years as Uber launched in the Boston area. We applied fixed-effects panel regression methods to model the relationship between Uber availability, VMT, and transit access. We also examined vehicle turnover and ownership at the Census Tract level to investigate if neighborhood change may have influenced observed changes in daily VMT. In contrast to previous studies finding associations between ride-hailing and large increases in VMT, we found that Uber availability was not related to changes in VMT in the cities of Boston and Cambridge, and was significantly related to only marginally higher average daily VMT outside those core cities (0.6% increase from the mean VMT). We also found slightly lower rates of vehicle turnover and ownership in areas outside of Boston and Cambridge after Uber availability. These results suggest that ride-hailing’s influence on VMT is likely smaller than indicated in other research, limited to vehicles registered outside MPO cores, and is likely not related to neighborhood change.

Citations
DOES HIGH-SPEED RAIL IMPROVE THE ATTRACTIVENESS OF CITIES? EVIDENCE FROM CHINA

Abstract ID: 216
Individual Paper

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City attractiveness refers to city’s capacity to attract diverse social groups, including residents, visitors, and businesses, to settle within its borders. Previous studies have investigated the socioeconomic impacts of High-Speed Rail (HSR) on city development, focusing on economic, environmental, and tourism impacts. However, the extent to which HSR affects overall city attractiveness using a consistent evaluation framework remains unclear.

This study addresses this gap by utilizing confirmatory factor analysis (CFA) to identify key influential factors of city attractiveness and using structural equation modeling (SEM) to examine the influence mechanism of HSR on city attractiveness. The analysis is based on historical city statistical data and HSR data for 286 prefecture-level cities in China from 2010 to 2016.

The study shows that economic performance and urban amenities are two primary factors that affect city attractiveness. Although urban amenities generally have a more significant impact on city attractiveness than economic performance, such an effect varies among different social groups, such as tourists, firms, and employers. In addition, the study finds that factors such as housing, education, and technology play more significant roles in enhancing city attractiveness than other amenities, such as natural environment, hotels, and theaters. Furthermore, the analysis shows that HSR has different influential mechanisms on city attractiveness during two distinct phases: introduction and operation. During the introduction phase, HSR indirectly affects city attractiveness through its joint effects on the economy and urban amenities. On average, the introduction of HSR improves city attractiveness by 47.1%. During the operation phase, HSR primarily influences city attractiveness primarily by improving urban amenities. For instance, a 1% increase in HSR operation, such as frequency and number of stations leads to a 0.668% increase in city attractiveness on average.

This study provides important implications for planning policy and practice. Firstly, it contributes to the body of knowledge on the wider socio-economic impacts of large-scale infrastructure, providing a comprehensive analytical framework that planners and policy analysts can adopt for impact assessment. The outcome of the assessment can furnish planners and policymakers with more accurate evidence that can improve the efficiency of future infrastructure investment and development. Secondly, this study provides a holistic and systematic examination of city attractiveness, including its measurement and influential factors, as well as HSR’ role in its improvement. Policymakers need to acquire comprehensive information about the city, rather than fragmented information from various angles, to facilitate policy decision-making. This approach can also recognize the city’s...
strengths and drawbacks based on unified evaluation standards and lead to more informed policy-making.

Citations

• Masson, S., & Petiot, R. (2009). Can the high speed rail reinforce tourism attractiveness? The case of the high speed rail between Perpignan (France) and Barcelona (Spain). Technovation, 29(9), 611-617.

Key Words: high-speed rail, city attractiveness, Transportation, confirmatory factor analysis, structural equation modeling

UNDERSTANDING THE OWNERS OF USED ELECTRIC VEHICLES: A SURVEY APPROACH

Abstract ID: 241
Individual Paper

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To fully achieve climate reduction goals, electric vehicles (EVs) need to be purchased by more than just higher-income households. In this research, we examine the impediments to EV adoption among lower-income households with a focus on the used EV market as these are less costly and more affordable. We conducted a large-scale survey of owners of used EVs in the United States to better understand who they are and their concerns and experience in driving a used EV. Data was collected online via posting the survey to used-EV related Facebook and Reddit communities. The survey took place from September to October 2022, and a total of 1,669 participants responded, of which 1,167 were legitimate responses. Most respondents are male, middle-aged, White, well-educated, and high-income. Prior to buying a used EV, respondents were most concerned about pricing, battery performance, and the availability of public charging stations. The findings of a logistic regression model indicate that those with lower incomes are more concerned about the vehicle prices and the availability of public charging stations. Lower-income participants are more likely to be satisfied with the battery performance of a used EV, but they are less likely to acquire used or new EVs in the future than higher-income participants. These findings are a first step to understand how to broaden the appeal of EVs to all households.

Citations


Key Words: electric vehicles, equity
ZERO-CAR HOUSEHOLDS AMONG OLDER PEOPLE: CHARACTERISTICS AND TRAVEL IMPLICATIONS

Abstract ID: 245
Individual Paper

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Vehicle dependence is nearly universal among U.S. residents, and older adults are no exception. Compared to older generations, today’s older adults rely more heavily on vehicles in their daily travel needs. One reason for this is today’s older adults are more willing to remain in their communities and age in their own homes (Joint Center for Housing Studies of Harvard University, 2019). Most of the communities in non-urban areas (e.g., suburbs, towns, secondary cities, and rural areas) are not convenient for people who have medical conditions that limit their driving capabilities. Additionally, the number of older people with medical conditions is increasing rapidly, with 8.3% of noninstitutionalized people aged 65 and older having self-care difficulties (National Center for Health Statistics, 2022).

The growing percentage of older people living in non-urban areas, and the increased medical and financial difficulties make owning and operating a vehicle impossible, creating a severely adverse environmental situation hindering older adults’ social engagement. This set of circumstances then leads to further physical and mental health complications drastically reducing the quality of life. Planning scholarship has documented the social factors and outcomes related to zero-vehicle households (Blumenberg et al., 2020; Brown, 2017; Klein, 2020). However, this line of work did not look specifically at older people’s vehicle ownership difficulties and travel implications.

This study aims to understand the characteristics of zero-vehicle households, and travel implications. Using the 2017 National Household Travel Survey (NHTS), I examine the residential location and vehicle ownership decisions of households headed by those 55 and older and the implications on daily travel. I first use one-way ANOVA, two-sample t-tests, and logistic regressions to examine what factors are related to having no vehicles among older people. I then use negative binomial regressions to examine how vehicle ownership is related to shopping, maintenance, healthcare, and social activity frequency.

Results indicate that households with retirees, lower incomes, or women living alone were more likely to have no vehicles. Additionally, individuals living in households without vehicles have fewer recreational and social trips. This study sheds light on the increased need for transportation support for disadvantaged older people, especially those with medical conditions and financial difficulties maintaining their vehicles and those living in low-density areas.

Citations

SIMULATING STREET NETWORK RESILIENCE AND ROBUSTNESS AROUND THE WORLD
Abstract ID: 249
Individual Paper

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Urban street networks are critical to the movement of people and goods, particularly when disruptions occur. Researchers have explored the resilience and robustness of different street network designs in the face of disruption during events like flooding, earthquakes, or terrorist attacks (Sharifi, 2019). Most of these studies tend to be case studies or focus on specific regions (Santos et al., 2021; Strano et al., 2013). However, less is known about the relative resilience and robustness of street networks across the world and the kinds of network designs that foster these characteristics. The present study addresses these gaps by answering two related questions. First, how vulnerable are street networks around the world to disruptions? Second, what characteristics are associated with networks more robust and efficient against those attacks?

To answer these questions, we model the street networks of every urban area in the world and simulate billions of trips across them. First, to derive urban area boundaries and socioeconomic covariates around the world, we use the Global Human Settlement Layer Urban Centres Database (UCD). Second, we use publicly available models of drivable street networks and related characteristics, derived from OpenStreetMap data (OSM) and constrained to each UCD urban area’s boundary. Our analysis covers 8,005 urban areas in the UCD, after removing places with fewer than 100 network nodes. To measure network resilience and robustness, we simulate trips across each network before and after various network disruptions. First, we generate 10,000 random OD pairs for each urban area. Then we simulate these trips before and after network disruptions of various types and magnitudes. We enact three types of network disruption by eliminating 1) the lowest-lying nodes to approximate a flooding event, 2) nodes with the highest centralities to proxy a targeted attack, and 3) a random sample of nodes to represent spatially distributed events. We simulate each of these disruption types at 0% (the undisturbed network), 1%, 2%... up through 10% of the network’s nodes eliminated.

The results of these simulations allow us to operationalize two indicators of network robustness and efficiency. We measure robustness as the percentage of solvable OD pairs that remain after each network disruption, and efficiency as the percent reduction in trip efficiency after each network disruption. This efficiency indicator adapts Latora and Marchiori’s (2001) indicator, which they defined as the mean of the reciprocal of shortest path between all node pairs. Finally, we model the two indicators as response variables in a set of six regression models. The characteristics of interest that we model include network connectedness, circuity, and intersection density. Collectively these measure the redundancy and efficiency of the underlying network, which theoretically helps it resist disruption. We also develop a novel “chokepoint” indicator of extreme relative dependence on few nodes, suggesting more likely network failure when such nodes are disrupted.

Our findings reveal that attacking nodes with high importance leads to the most severe network disconnection and reduced trip efficiency. Random disruptions result in moderate impacts and elevation-based disruptions result in the least. Among world regions, urban areas in Europe, Northern America, and Oceania were least robust and resilient. On average, eliminating the 10% most important nodes disconnected 66.2% of OD pairs. We also find that the average node degree is positively associated with robustness and efficiency as it adds redundancy to the network. In contrast, our chokepoint indicator has a negative association on robustness and efficiency. We argue that urban planners and engineers should emphasize designing new—and retrofitting old—networks with more redundancy and less reliance on chokepoints to create more robust and resilient cities.

Citations


Key Words: Network design, Street network, Resilience, Robustness, Transportation

ASSESSING THE CASUAL EFFECT OF CITY-LEVEL URBAN FORM ON CAR ACCIDENTS: EVIDENCE FROM A PANEL STUDY OF CHINESE CITIES

Abstract ID: 262

Individual Paper

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With the rapid motorization and urbanization processes worldwide, road accidents have become one of the major challenges for public safety. Fifty million people are injured and almost 1.25 million die in crashes each year around the world (WHO, 2015). Improving road safety is critical for the health and well-being of urban residents.

City-level urban form, one of the primary ways in which urban planners intervene the urban systems, has attracted increasing attention due to its long-term impacts on mobility (Mohamed et al., 2014; Ewing et al., 2016; Najaf et al., 2018). Despite that existing studies on the relationship between urban form and car accidents provide useful insights, some research gaps still exist. First and foremost, methodologically, existing studies are mostly based on cross-sectional data, which limits their usefulness in causal inference. Understanding the causal effect of urban form on car accidents is fundamental for informative policy design to improve road safety. Secondly, on the measurement side, road safety is mainly measured by traffic fatalities in existing studies, although only a small fraction of crashes result in death. In terms of measures of urban form, existing studies on crashes mostly focus on a single dimension (e.g., compactness versus sprawl), while ignoring the multiple-dimension nature of urban form and the complex interactions between them. Thirdly, existing studies tend to focus on low-density, car-friendly North American cities. Empirical evidence on the relationship between urban form and crashes in high-density, transit-oriented Asian cities, such as Chinese cities, is still lacking.

To fill these gaps in the literature, we assess the causal effect of city-level urban form on car accidents in Chinese cities with a panel study. China has experienced an unprecedented urbanization process in the past decades, which makes it an ideal setting to evaluate the changes in car accidents resulting from the changes in urban form.

We compile a panel dataset that tracks the changes in city-level urban form and car accidents in 110 major cities in China from 2013 to 2019. Then, we calibrate a set of fixed-effect panel models to assess the causal impact of urban form on car accidents as measured by the number of car accidents per 100,000 individuals, the number of fatalities per 100,000 individuals, and the number of injuries per 100,000 individuals. We measure city-level urban forms along the compact-sprawl, complex-regular, monocentric-polycentric, and contiguous-leapfrogging dimensions.
Moreover, we explore the potential heterogeneity in the effect of urban form across different types of cities. The effect of urban form on car accidents is complex. Specifically, compact form leads to a higher number of crashes, injuries, and fatalities, which differs from US-based studies that document a positive effect of sprawl on fatalities (Ewing et al., 2016). The different outcome may be due to the difference in the sprawl mode and extent between China and US. Both complex and leapfrogging forms cause more crashes and injuries, which are associated with the more complex traffic conditions and longer travel distances in cities with such characteristics. Polycentric form unexpectedly results in more traffic fatalities, which may be related to the lower self-sustaining level of subcenters in China — individuals living in subcenters still need to commute to urban centers for work and leisure. Finally, we find significant heterogeneity in the urban form effect on car accidents by city size, industrial structure, and precipitation level of cities. For example, the reduction effect of continuous development on crash frequency tends to be smaller in larger cities.

Our findings highlight the importance of incorporating city-level land-use policies into the planning practices to improve road safety and can be used as a guideline for policymaking.

Citations


Key Words: Road safety, Traffic fatalities, Urban form, Causality, China

EVALUATING THE AVAILABILITY OF ALTERNATIVE TRANSPORTATION OPTIONS FOR OLDER ADULTS BY AGE GROUP: A CASE STUDY OF FLORIDA

Abstract ID: 267
Individual Paper

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Background and Objective: Older adults are often facing challenges to fulfill their travel needs since they become reluctant or gradually lose the ability to drive. This challenge could lead older adults to experience social exclusion, which negatively affect mental, social, and physical health. To inform policy and to prevent social exclusion of older adults, this study aims to quantify spatial gaps between the availability of alternative transportation options, which are the transportation services other than private automobile such as public transit, paratransit, specialized transportation, or senior transportation, and the distribution of older adults population by age group (i.e., age between 65 and 74, between 75 and 84, and above 85) instead of one older adults group which represent typically age above 65.

Methods: Using Florida as a case study, the study overlaid the availability of alternative transportation options against the distribution of older adults’ population by age group. First, this study mapped the comprehensive transportation availability at the census block group level using the database from Florida Department of Transportation. Second, the GIS layer to show comprehensive transportation availability was used to find statistically significant clustered areas with lower transportation availability. Third, this study identified areas with
highly clustered older adult populations by age group in census block group level. Finally, by overlapping two cluster analysis layers, the spatial gaps were created to show the clustered census block groups with concentrated older adults’ populations by age group and lower transportation availability.

Results: The results showed the spatial gap of alternative transportation services with the amount of affected older adult population. There was slight difference among age group, the majority gap areas included Central Florida, part of South-West, and East coastal areas. The total number of older adults affected were 904,244 people: 509,317 (21.9% of total 2,321,394 people), 303,138 (22.6% of total 1,339,375 people), 91,789 (5.9% of total 544,659 people) for older adults age between 65 and 74, between 75 and 84, and 85 above respectively.

Contribution and Conclusion: The findings demonstrates that this methodology was successful in identifying areas that lack of availability to alternative transportation options. Also, while most older adults related transportation studies looked at a single group of 65 or older with bigger analysis units, this approach investigated older adults in three age groups with a finer geographic resolution.

Through using Florida as a case study, this paper shows that these quantified and visualized results would be useful not only in illustrating spatial information, but also in providing a valuable information to urban and transportation professionals as well as relevant stakeholders to better resolve one of social exclusion challenges for older adults.

Citations


Key Words: Older adults, Alternative transportation service, Spatial transportation availability

THE IM/MOBILITIES OF COMPLETE STREETS: A CRITICAL DISCOURSE ANALYSIS PROBLEMATIZING ‘ALL-AGES-AND-ABILITIES’
Abstract ID: 270
Individual Paper

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Complete streets emerged as part of a paradigm shift to reclaim our mobility dependence, following decades of autocentric planning patterns that supported those who drove over those who did not. Although an important and nuanced element of the mobilities landscape, complete streets, and the mobility practices within, have often been framed as ‘uncritically good things’ and have thus evaded much critical inquiry (Zavestocki & Agymean, 2014).
One of the most ubiquitous promises wrapped up in complete streets is planning for ‘all ages and abilities’, which implies that complete streets serve an all-inclusive public, regardless of age, gender, race, or ability. Despite this phrase being nearly commonplace in all complete streets policies, very little complete streets literature critically explores how this phrase is used, or who it serves. The ‘who’ of this question is becoming increasing worrisome. A recent U.S. study found that only 7% of complete streets policies mention low-income communities, racialized populations, or women as part of their planning considerations (Elliot, McLeod, Bopp, 2022). Even further, recent critical literature has called attention to the cooption by neoliberal politics, behavioural control, and exclusion rooted in white supremacist and patriarchal power structures evident in sustainable transportation initiatives, such as complete streets (Zavestocki & Agyeman, 2014; Ingram, Leih, Adkins, Sonmez, Yetman, 2020).

Evidently, there is a disconnect between the promises and outcomes of complete streets. In order to understand and respond to this disconnect, complete streets should be problematized as more than just a ‘good thing’, but rather as sites where the messy politics of mobility play out; where power relations are experienced and made evident. This paper specifically looks to unpack the embedded power-relations within all-ages-and-abilities promises, and the types of mobilities (and immobilities) that are supported.

To that end, this paper deploys a two-part critical discourse analysis to shape a potential politics of complete streets, both theoretically and practically. Existing literature on complete streets is assessed through the theoretical paradigms of the politics of mobility, and im/mobilities, unearthing the complex and nuanced mobilities and immobilities that are embedded, yet often unconsidered, within complete streets discourse (Creswell, 2010; Hannam, Sheller & Urry, 2006). These conceptualizations of im/mobility in complete streets are then applied to the practical policies (i.e., street design and policy documents) that discursively and materially construct complete streets. In framing practical complete streets planning documents through an im/mobilities lens, this work forms a novel framework for exploring the promises of complete streets with attention to the situated power that is realized spatially, societally, and in the body (Creswell, 2010). To support this framework, the analysis was completed via a key-term assessment, focused on terminology that support all-ages-and-abilities promises. This key-term assessment was then supplemented by an in-depth discourse review which looked to understand not only the prevalence of certain terms, but how they were used and operationalized within the plans. At the time of writing, no such review has yet occurred for the Canadian context.

The findings reflect an exploratory appraisal of the current practices of complete streets policies, and what a more inclusive politics of complete streets in Canada could look like. Specifically, this paper critically assesses and problematizes Canadian policy and design guidance documents on complete streets highlighting the current experiences and identities that are omitted from ‘all ages and abilities’ framing. The results illuminate their embedded im/mobilities and the politics of mobility they reinforce. Most importantly, the paper provides policy recommendations for further aligning complete streets to the goals and aspirations of mobility justice.

Citations


Key Words: Complete streets, Politics of mobility, Mobility justice, All-ages-and-abilities
EXAMINING THE NONLINEAR EFFECTS OF NEIGHBORHOOD HOUSING + TRANSPORTATION AFFORDABILITY ON SHARED DOCKLESS E-SCOOTER TRIPS USING MACHINE LEARNING APPROACH

Abstract ID: 274
Individual Paper

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Despite the benefits of using shared micromobility, it remains unclear why some areas have higher usage rates than others from the affordability standpoint. It is often assumed that shared micromobility is an affordable transportation mode for those who cannot afford to use their own vehicles. For example, dockless bikesharing provides an alternative mode for disadvantaged populations or underserved communities (Qian et al., 2020). However, statistics reported that the income of the average scooter user seems to match or even exceed the area median income (NACTO, 2020).

Nevertheless, the cost is not always the primary barrier for lower-income residents to utilize micromobility. The reason is simply a lack of availability in specific neighborhoods. The reasons for the heavy use of shared micromobility are not merely transportation costs but also the location and characteristics of a neighborhood. Location affordability is a popular concept in land use and transportation planning, which explains the affordability of a given location considering housing and transportation costs (Acevedo-Garcia et al., 2016). Understanding the concept of affordability should not be limited to considering housing and transportation costs as the most significant share of a household budget. A more comprehensive understanding is required within the elements of an urban system (Hartell, 2017). To better understand the relationship between location and the affordability of shared dockless e-scooters, it is necessary to consider the pre-existing disparities in access to shared dockless e-scooters in low-income neighborhoods or those located farther from the city center. Addressing these inequities can improve the accessibility and affordability of shared micromobility and promote more equitable transportation systems.

Therefore, the paper examines the nonlinear relationship between shared dockless e-scooter trip density and housing + transportation (H+T) affordability using machine learning methods. By analyzing shared dockless e-scooter trip data collected between April 2019 and March 2020 from 1,886 census block groups in Los Angeles, we used a random forest method to investigate this nonlinear relationship. The variable importance plot revealed that economic variables (cost versus income) have greater explanatory power than others. In the partial dependency plots, neighborhoods spending more than 35% of their income on housing costs were more inclined to use e-scooters. On the other hand, when transportation represents more than 9% of household income, the e-scooter trip density decreases.

The results of this study highlight the importance of location-specific planning in promoting the effective use of shared dockless e-scooters as a sustainable and active transportation mode beyond simply focusing on costs and incentive programs.

Citations

CONTRASTING STAKEHOLDERS’ PERSPECTIVES ON THE FIRST FULL-YEAR SCHOOL STREET INITIATIVE IN ONTARIO, CANADA

Abstract ID: 275
Individual Paper

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The decline of active school travel among children has corresponded with the rise of vehicular congestion around elementary school sites across North America (1, 2, 3). This congestion poses safety hazards for young children who are less visible to motorists when navigating the streetscape. School Streets (SSs) represent one approach to minimizing motor vehicles around school drop-off zones, by closing streets to through-traffic at the beginning and end of the school day (4). Since 2018, a growing list of municipalities in Canada have begun experimenting with SSs at varying frequencies and for varying lengths of time. In September 2021, a SS initiative launched in the mid-sized city of Kingston, Ontario, operating every school day for the entire school 2021-2022 year (5).

Using the Kingston SS as a case study, this paper seeks to address three questions: 1) How was the SS perceived by diverse community stakeholders, namely students, parents, and residents? 2) In what ways do these perceptions overlap and conflict? and 3) How can these stakeholders’ perceptions inform future iterations of this initiatives? Various sources of data were gathered by the author between prior to, during, and following the 2021-2022 school year to comprehensively evaluate the SS. From May–July 2022, feedback about the SS was gathered from students, parents, and residents who were directly exposed to the initiative. A focus group was used to gather student feedback, while parent and resident feedback was solicited through online surveys. Eight students (aged 8-11) participated in the focus group; 59 parents completed the parent survey; and 27 residents completed the resident survey.

The findings revealed mixed perceptions about the SS initiative. Students’ and parents’ perceptions converged in their support for the program and enthusiasm about it continuing. Students reported feeling safer and less stressed upon arrival and dismissal from school because of the SS, and most parent respondents reported that the SS created safer conditions around the school. Students’ perspectives diverged from some parents’ on the topic of children knowing when the street was closed; all student participants indicated that it was obvious when the SS was operating or not, whereas some parents expressed concerns about their children not detecting the difference. Residents were mostly unsupportive of the program, and some articulated strong desires for it to conclude. Residents’ and parents’ perceptions converged about children occupying the street when the SS was not operating, while residents also raised concerns about vehicular congestion being ‘pushed out’ to neighbouring streets.

These findings illustrate the challenges faced by planners and program implementers in balancing conflicting stakeholders’ perspectives regarding street rebalancing initiatives that target children. Avenues are discussed for SS program adaptation to assuage stakeholders’ concerns while maintaining the benefits that these interventions
afford to our most vulnerable road users.

Citations


Key Words: school streets, active school travel, evaluation, stakeholders, Ontario

EXPOSURE EFFECT IN PEDESTRIAN-INVOLVED CRASH WITH THE PEDESTRIAN COUNT DATA
Abstract ID: 296
Individual Paper

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From 2016 to 2020, the most dominant cause of pedestrian-involved crashes in Oregon was ‘Did not yield right-of-way’ followed by ‘Non-motorist illegally in roadway’ (Oregon Department of Transportation, 2022). To help address this problem, planners need to better understand one fundamental factor – the exposure effect. In crash analysis, traffic volume is one of the strongest predictors of crashes at a given location (Griswold et al., 2019). However, most cities do not have data on pedestrian volumes. Several previous research studies estimated pedestrian exposure to traffic flow with indirect measurements of pedestrian activity such as population density (Al-Mahameed et al., 2019; Almasi & Behnood, 2022; Sanders et al., 2017). However, their findings cannot estimate exposure effects as accurately as using actual pedestrian count data. This paper aims to more accurately estimate the effect of exposure to pedestrian crashes by using pedestrian count data and vehicle traffic volume data from the Oregon traffic monitoring system. We selected 10 signalized intersections in Oregon collecting numbers of pedestrians and this study takes census blocks within a half-mile buffer zone of each selected intersection. In addition to pedestrian and vehicle traffic volume, we estimate the relationship between built environmental factors that correlate with pedestrian exposure, such as land use, intersections, and public transit stops, with pedestrian crashes by using path analysis.

We confirm that pedestrian volume is a strong predictor – as strong as vehicle volume – at our study locations. Like previous studies, the intersection density and the ratio of commercial area and mixed-land use area are related to the higher probability of pedestrian-involved crashes. This is because these factors not only increase the pedestrian volume but also increase the probability of pedestrian exposure to the traffic flow. However, public transit stops that can induce pedestrian activities are not a strong predictor of both pedestrian volume and pedestrian-involved crashes. In addition to the pedestrian exposure effect, we also found that both the number of pedestrian-involved crashes and pedestrian fatalities are affected by light conditions, shorter daylight hours, and places with no street lights.

Overall, our findings indicate the importance of more accurate estimates of pedestrian exposure using pedestrian count data, in addition to indirect measurement. These findings can be used to plan and design safer environments.
by separating pedestrians from vehicles and higher visibility for both pedestrians and drivers at places that are more used in commercial or mixed-land use areas and have higher possibilities of pedestrian exposure.

Citations


Key Words: pedestrian safety, pedestrian count data, exposure effect, crash analysis, path analysis

A GENDERED PERSPECTIVE ON RIDE-HAIL USE IN LOS ANGELES, USA

Abstract ID: 320

Individual Paper

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Gender differences in travel are pervasive throughout the world. While gender gaps have narrowed in many different spheres, including notably education and employment, most scholarly research finds that such is not the case for travel, where gender differences persist (LA Metro, 2019; Loukaitou-Sideris, 2016). Studies examining the gender gap in mobility patterns in the US have often focused on gender differences in travel time and distance. Fewer have examined gender differences in mode choice; all that we could find were a dozen or more years old (Crane and Takahashi, 2009; Rosenbloom and Burns, 1993). Since then, several new mobility options have been introduced and have spread rapidly in cities around the globe. Most notably, ride-hail service, which connects drivers with customers through smartphone apps, grew explosively between its introduction in the San Francisco Bay Area in 2009 and the COVID-19 pandemic in 2020. While there is a growing body of research on the factors influencing travelers’ use of ride-hailing, patterns of ride-hail trip-making, and the effects of ride-hailing on traffic congestion, curb space and parking, public transit, and labor, gender differences in ride-hail adoption have received little attention so far.

Thus, in this study, we examine whether gender differences persist in ride-hail use. We do this by examining the attitudes toward and perceptions about travel choices, ride-hail adoption, familiarity with ride-hail, use patterns, and experiences of nearly 300 travelers in metropolitan Los Angeles, California, USA. We administered a survey of travelers in Los Angeles between November of 2020 and January of 2021, exclusive of the holiday periods. We employed a semi-structured questionnaire and quota sampling approach for the data collection. The survey included questions on attitudes and perceptions, ride-hail use patterns in the pre-pandemic period, socio-economic and household characteristics of users, car access, incidences of sexual harassment in public transit, perceptions of safety and convenience of ride-hailing compared to other means of travel (such as public transit and
walking), constraints that hinder using ride-hailing, and whether ride-hailing is enabling trips to new activities that could not have been done otherwise.

Our survey responses show that ride-hail service offers a convenient travel option for women – one that enables many of them to access needed destinations in their daily lives. Women in Los Angeles are statistically significantly more likely to use ride-hail compared to men, all else equal, and are more familiar with these services as well. Women in carless or car-deficit households in particular benefit from using ride-hail services to meet their travel needs, which differ, on average, from men’s. For example, more women use ride-hail services for household-serving trips than men. However, ride-hail is not free of challenges for women. Concerns about safety, fear of personal and financial information leakage, and limited digital literacy and access to financial resources can prevent women from using these services. Compared to men, a larger share of women takes ride-hail trips booked by someone else in the household and/or travels with a companion.

These findings suggest that public policy should seek to ensure that the option to use ride-hail should be extended to as many people as possible, including those without mobile devices with data plans and credit or debit accounts. Riders should also be able to easily report problematic behaviors by drivers or fellow passengers to public authorities, in addition to reviews of and reports to ride-hail companies.

Citations

- Rosenbloom, S., Burns, E., 1993. Gender Differences in Commuter Travel in Tucson: Implications for Travel Demand management Programs.

Key Words: Ride-hail, Gendered travel, Travel behavior, Mode choice

UNDERSTANDING CULPABILITY FACTORS IN TRAFFIC CRASHES

Abstract ID: 321

Individual Paper

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Introduction: The causes of traffic incidents are complex. Understanding the effects of culpability factors on crashes can help planners target effective measures to improve safety. Numerous studies have investigated the determinants of traffic crashes, but research seldom focus on the simultaneous effects of both built environment and driver behavior along drivers’ sociodemographic characteristics. Some existing studies have examined the influence of the built environment on crashes (Xu and Huang, 2015), while others have analyzed the impact of driver behavior on crashes (Al-Wathinani et al., 2021). Fewer research has taken a holistic perspective on the causes of crashes to understand sources of culpability (Wahlberg, 2017). This research fulfills this gap using a comprehensive analytical framework, geographically weighted regression model for count data, and a longitudinal dataset from the Crash Records Information System from the Texas Department of Transportation (TxDOT). Specifically, we examine the following questions:

Is there a temporal-spatial pattern of traffic crashes?
What factors contribute to total, fatal, and injury crashes, respectively?
To what extent do variables in each category of built environment and drivers’ characteristics contribute to crashes?

Methodology: The study utilizes statistical modeling-based approaches to investigate the associations between crash outcomes and predicting variables including the built environment, drivers’ behavioral and socio-demographic factors. We use the 2016-2022 Crash Records Information System data for Tarrant County from the Texas Department of Transportation (TxDOT). Crashes are categorized as Fatal and Injury (FI) or Property Damage Only (PDO). The built environment is characterized by land use patterns and road configuration (Huang et al, 2018). The drivers’ behavior is classified under 12 categories extracted from the CRIS database, while socio-demographic factors include age, gender, ethnicity, and license type, as readily available in the database.

We hypothesize that highway segments with higher speed limit, more vehicles, higher number of lanes, higher environmental densities and more activity-based land uses, etc. are more likely associated with more crashes. Similarly, male, younger drivers are more likely to engage in risky driving. Elderlies are more likely limited by their physical health conditions. These drivers may have a higher chance of getting into accidents. On the other hand, well-educated drivers and those with more years of driving experience are less likely to get into accidents.

The study employs a GIS-based spatial analysis at the roadway level to identify accident hotspots and investigate the infrastructural/built environment characteristics associated with the crashes. A pre-crash process view of crash events is conducted to explore whether crashes are caused by a single factor or part of a sequence of events (Benner, 1978) involving both the built environment and driver behavior. The Haddon matrix is utilized to classify the pre-crash predictors, including the built environment, driver behavior, and socio-demographics, to identify the sources of culpability associated with driver behavior in relation to the built environment. Finally, the geographically weighted regression approach is applied to analyze the association between various factors and crashes. The study thus provides a comprehensive analysis of the factors leading to traffic crashes and can inform policy decisions aimed at improving road safety.

Preliminary Findings and Relevance to Scholarships: The preliminary results indicate that built environments are associated with crashes and account for percentage increase in crash fatality for each categorical indicator of the built environment. The findings are consistent with many previous studies (see, e.g., Xu and Huang, 2015). Our preliminary results also indicate that behavioral factors account for percentage increase in crash fatality for each categorical indicator of driver behavior. Moreover, our preliminary results indicate that there is no association between the built environment and the drivers’ behavior. When taking into account all the variables, the final results will provide empirical evidence for our research questions. Implications of the findings for planning and future research will be discussed.

Citations

https://doi.org/10.1016/j.aap.2014.10.020

Key Words: crashes, built environment, driver’s behavior, travel safety, culpability

IS YOUR NEW WORK-FROM-HOME HABIT ACTUALLY LIKELY TO HAVE LONGEVITY?
Abstract ID: 345
Individual Paper

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Understanding the longer-term implications of the Covid-19 pandemic on work, commuting, and travel behavior is critical towards re-orienting travel demand forecasts and planning analyses to reflect a changing reality. That reality increasingly includes telework (work-from-home), “a workplace arrangement that allows a person to work from home instead of commuting to their usual place of work (Sweet and Scott, 2022)” . The Covid-19 pandemic ushered in more teleworking which has led to unequal adoption across employee sub-segments and work geographies (Hensher, Beck, & Wei, 2021). Understanding how and under what condition telework is likely to be adopted is critical towards adapting transportation systems to the evolving future.

Important research on pandemic-induced telework has commonly employed survey data collected at one point in time which captures respondents’ stated previous, current, and prospective future telework frequencies (Sweet & Scott, 2022; Hensher, Wei, Beck, & Balbontin, 2021). But it is critical to verify findings using alternate research methods. Towards that end, this study fuses repeated cross-sectional travel survey data from the Greater Toronto and Hamilton Area in Canada from 2016 and 2018 (before the pandemic) and 2021 (“after” the peak pandemic) to estimate both the magnitude of changes in teleworking and the relative changes in propensity among different user groups and geographies. Changes in teleworking over time are expected based on individual characteristics, job characteristics, household characteristics, availability of mobility tools, and built form characteristics. These different patterns of telework diffusion are tested using an ordered logit model with interaction effects, a method similar to that adopted by Sweet and Scott (2021), to explore shared mobility adoption. Preliminary descriptive findings from survey data collected in 2023 will also be shown to explore the longevity of changes in telework relative to previous years.

Understanding how work and commuting activities are changing is paramount for planners to be most transformative in designing cities and transportation systems. Study findings suggest that the most persistent increases in teleworking over the long term appear to be in more highly urbanized downtown contexts, while more suburban and auto-centric employment hubs appear to be less affected. While it is unclear what long-term adaptations will be undertaken by commercial office operators, findings from this study suggest significant potential for long-term disruption in existing geographies of work and commuting relative to pre-pandemic patterns. This likewise suggests the need to test the robustness of travel demand forecasts focused on areas (which tend to be transit-oriented) which are expected to be most significantly impacted by increased teleworking.

Citations


Key Words: telework, work-from-home, commuting, new normal, Greater Toronto and Hamilton Area

PEOPLE MOVING BETWEEN THE AIRPORT AND CITY: GROUND ACCESS VIA PUBLIC TRANSIT
Abstract ID: 386
Individual Paper

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This study considers the airport as a part of the city, an important transport hub and employment center. In the Chinese context, public transport is the key intracity travel mode, and this study will reveal how people with different characteristics access, use or serve the airport via public transport. This study will: (1) develop a method to identify different roles who access the airport, (2) visualize the spatial and temporal distribution pattern, and (3) establish a quantitative relationship model of influencing factors. Smartcard data will be the main data source, and Wuhan will be selected as the study site. The findings will reveal (a) who the users of public transport in airport ground access are, including employees, travelers and locals, (b) what their travel and activity patterns are, including the trip to/from the airport and other intracity trips (c) how their intracity travel connects the city and the airport and influence urban development.

Citations

Key Words: Airport ground access, Public transport, China

UNRAVELING THE DISPARITIES IN FREIGHT-RELATED CRASHES BETWEEN DISADVANTAGED AND LESS-DISADVANTAGED NEIGHBORHOODS
Abstract ID: 422
Individual Paper

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In the past decade, freight demand experienced unprecedented growth in many cities worldwide, resulting in a considerable surge in freight vehicle traffic volume and related crashes. However, the spatial distribution of these
crashes remains largely unknown. Given that crashes involving freight vehicles tend to be more fatal and injurious, it is crucial to examine their spatial distribution, especially from an equity perspective. In this study, I investigated whether freight-related crashes are more concentrated in disadvantaged neighborhoods and, if so, explored the underlying reasons for such patterns. This study focused on Seoul, South Korea, a city experiencing rapid growth in freight movement and related crashes.

The analysis results revealed that, before controlling for other neighborhood-level factors, freight crashes, regardless of injury severity, are more likely to occur in disadvantaged neighborhoods. According to the results of the decomposition analysis, these disparities can be mainly attributed to the concentration of certain freight-related facilities and low-hierarchical and narrower roads in disadvantaged areas. However, I found no evidence that differences in non-motorized infrastructure or built environment characteristics between neighborhood types are the primary drivers of freight crash disparities. Disparities in non-severe crashes appeared to be fully explained by the included neighborhood attributes, while about 40% of disparities in severe crashes remained unexplained.

The findings of this study alert planners about the inequitable distribution of freight crashes in the study area. These findings also suggest that when implementing measures to reduce freight crashes and address the gap in such crashes based on neighborhood socioeconomic status, it is important to prioritize disadvantaged neighborhoods in closer proximity to freight-related facilities and with denser networks of low-hierarchical and narrow roads.

Citations


Key Words: Road traffic safety, Freight crashes, Neighborhood disadvantage, Spatial equity

A DATA-DRIVEN METHOD FOR MULTI-OBJECTIVE AUDITING OF SCOOTABILITY: A TALE OF TWO CITIES

Abstract ID: 451

Individual Paper

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The emergence of e-scooters has provided affordable and accessible transportation solutions, contributing to low-carbon mobility opportunities. However, integrating e-scooters into urban transportation systems requires effective strategies to address challenges such as infrastructure upgrades. The travel purposes of e-scooter users have been proven heterogeneous, leading to diverse preferences for infrastructures. While some studies have examined the usage patterns of e-scooters and their relationship with the built environment and demographic factors, little attention has been paid to evaluating the suitability of urban transport networks for e-scooter usage considering the heterogeneous travel purposes. This study aims to address the gap in the literature by developing a data-driven multi-objective indicator system for evaluating scootability. The study answers two sub-questions, First, how to infer trip purpose for scooter usage without ground truth; and how to develop the indicator system while considering the user preference for scooter trips of different purposes. Second, what are the preferences of the physical environment and infrastructure elements for different e-scooter trip purposes.

To infer the trip purpose, this study combines the probability-based method and unsupervised machine learning algorithm. Bayes’ theorem was employed to augment the OD contexts of e-scooter trips. The k-means algorithm
was employed to cluster trip purposes. To construct a multi-objective indicator system, an novel ensemble feature weighting method is proposed to quantify the importance of built environment indicators for the route choice of different trip purposes. The proposed method combines several standalone feature weighting methods for scoring the importance of variables for the indicator system.

The case study was conducted in Brisbane and Christchurch with over 150,000 e-scooter GPS trajectories trips. Built environment metrics were primarily extracted from GIS data and Street View Imagery. The results suggest that e-scooters are mainly used for non-commuting purposes, such as dining, leisure, and shopping. Among these activities, dining makes up the highest percentage, accounting for over 50% in Brisbane and over 40% in Christchurch. Possible commuting activities include transit and homing, accounting for approximately 10% and 3% in Brisbane, and 24% and 7% in Christchurch. In addition, e-scooter users tend to travel at higher speeds for transit purposes, and leisure purposes trips tend to have the highest probability of detouring. The linear regression results demonstrate that the built environment variables explain higher variations of route choice preferences with classified trips for different trip purposes compared to unclassified trips, suggesting the validity and necessity of developing a multi-objective model. The patterns of weighted indicators for different trip purposes suggested that homing purpose are not sensitive to the presence of bike lanes, the slope of the terrain positively affects the user preferences across all trip purposes, which is different from the pattern of cycling from previous study. In addition, environmental factors appear to have a greater influence on the preferences for leisure trips compared to other types of trips.

The study concludes that trip purposes affect the routing of e-scooter trips. The proposed trip inference method contributes to the current body of knowledge by introducing a novel approach that combines probability-based techniques with unsupervised machine learning. The multi-objective scootability auditing framework provides valuable insights for upgrading urban infrastructure tailored to users' diverse trip objectives, facilitating the seamless integration of this emerging mode of transportation into urban networks.

Citations


Key Words: E-scooter, Micromobility, Trip purpose, Transport infrastructure planning, Scootability

HAPPY AND HEALTHY COMMUTERS: AN EMPIRICAL STUDY INVESTIGATING HOW TRAVEL BEHAVIOR AND COMMUTE SATISFACTION AFFECT SELF-RATED HEALTH AND HAPPINESS

Abstract ID: 456
Individual Paper

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Happiness, well-being, or quality of life have increasingly become an essential part of the agendas of governments and international organizations. While previous research has highlighted the impact of travel behavior and satisfaction on well-being and health, the complex relationship between these factors still needs to be explored. Therefore, understanding how travel behavior and commute satisfaction influence self-rated health and happiness is crucial for developing effective interventions to promote well-being in daily commuting.

To address this gap, we conducted a neighborhood satisfaction survey in Qingdao, China, between August and September 2022. The survey included information on social economic status, individual characteristics, subjective neighborhood satisfaction, travel behavior, commute satisfaction, self-rated health, and subjective happiness. We applied principal component analysis to construct residential satisfaction from social, economic, and physical dimensions. We developed a path analysis, a type of structural equation model, to explore the relationship between travel behavior, commute satisfaction, self-rated health, and happiness.

We collected 18,778 complete survey responses, with 42% of respondents being male. Most respondents were between 30 and 59 years old, and 55% had an annual household income between 30,000 RMB (4,364 USD) and 99,999 RMB (14,521 USD). We found that about 24% of respondents reported active travel as the major travel mode, 28% used public transportation, 17% used e-bike, and 31% used a private automobile.

The results of our path analysis reveal that self-rated health is significantly and positively associated with happiness. In addition, satisfaction with commute travel time is positively associated with self-rated health and happiness. However, self-reported commute travel time and distance did not significantly impact self-rated health or happiness. Moreover, our analysis indicates that riding an e-bike is less likely to result in happiness than using a private automobile. At the same time, there was no significant difference between active travel and driving. Residential satisfaction positively contributed to both self-rated health and happiness.

In conclusion, our study provides valuable insights into the relationship between travel behavior, commute satisfaction, and self-rated health and happiness. Our findings have important implications for developing interventions to promote well-being in the context of daily commuting, particularly with regard to the importance of residential satisfaction and the satisfaction of commute travel time on well-being.

Citations


Key Words: travel behavior, commute satisfaction, self-rated health, happiness, well-being

CAUSAL PATHWAYS TO SUBJECTIVE WELLBEING: A NATURAL EXPERIMENT STUDY OF SOCIAL, PSYCHOLOGICAL, AND ENVIRONMENTAL MEDIATORS IN PUBLIC TRANSPORT USE AMONG OLDER PEOPLE

Abstract ID: 457

Individual Paper
Background: Staying active is essential for older people to achieve greater subjective wellbeing (evaluative, hedonic and eudaimonic wellbeing) (Steptoe et al., 2015). Subjective wellbeing has thus become a critical concern of transport planning in ageing cities. Empirical research has shown that public transport can affect all aspects of subjective wellbeing for older adults (Sun and Du, 2023). However, the mechanisms by which behavioural changes impact wellbeing when facing a new transport infrastructure remain unclear. Social, psychological, and environmental factors are suggested as potential mediators (Mouratidis, 2021). Evidence from cross-sectional studies offers non-causal pathways, while experiment studies with cohort design are scarce. In this study, we aim to use a natural experiment to explore what social, psychological, and environmental factors mediate the relationship between public transport use and three aspects of subjective wellbeing.

Method: We conducted a natural experiment with a cohort of 449 participants between 2019 and 2021. The intervention is a new metro line in Hong Kong. Participants from the treatment group were older people living in 400m buffered areas of the new stations. The control group consisted of participants living in comparable station catchments, but the stations have been operating for over 15 years. A three-step approach was adopted for analysis. First, we used linear and logistic regression models to explore associations between exposures and outcomes, exposures and hypothesised mediators, and hypothesised mediators and outcomes. The exposure variables were binary, indicating whether participants increased their metro and overall public transport use after the intervention. The outcome variables were evaluative, hedonic, and eudaimonic wellbeing. The mediators consisted of psychological (e.g., attitude toward metro use), social (e.g., social network), and environmental factors (e.g., environmental perception). Then, causal mediation analyses were employed to examine the mediating effects of these "plausible" mediators for the treatment group. Separate mediation models were fitted by including one mediator, one exposure, and one outcome, adjusted for covariates. Covariates in the models included participants' baseline travel behaviours, sociodemographics, and health status. Finally, the same approach was conducted for participants in the control group.

Results: We found that older people who increased their metro and overall public transport use experienced better wellbeing than those who maintained or decreased public transport use. Social network and loneliness were significant mediators of the total effects in both treatment and control groups. A considerable portion of the difference in the three wellbeing aspects was mediated by variations in social network sizes and loneliness levels.

Environmental factors showed weaker mediating effects on the travel-wellbeing mechanism compared to social factors. Perceived route environment mediated the effects on evaluative and hedonic wellbeing for the treatment group, while no significant indirect effects were found for the control group. Additionally, no significant pathways were found through psychological factors for both groups.

Conclusion: Our natural experiment study contributes to causal pathways linking public transport use to subjective wellbeing through social and environmental factors. The mediating effects observed suggest that new metro infrastructure can influence the mechanisms by which behavioural changes affect wellbeing. We found the increase in subjective wellbeing was largely explained by social factors, with stronger indirect effects in the treatment group. We could provide more opportunities to increase travel with the new transport through community empowering activities. Moreover, the built environment can affect wellbeing outcomes for older people in these areas. Efforts should include such as providing quality sidewalks and greenway improvements. The causal pathways can help refine strategies to improve older people’s wellbeing through new transport infrastructures.

Citations

Key Words: Public transport, Wellbeing, Social network, Planning implication, Natural experiment

PROMOTING SUSTAINABLE DEVELOPMENT WITH INTEGRATED LAND-USE AND TRANSPORTATION POLICIES
Abstract ID: 461
Individual Paper

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Many American cities, like Fresno in California, have continuously expanded outward in the past century, which is the least preferred urban form for most urban planners. Such a spatial pattern, called urban sprawl, is often criticized for its problems in consuming more land and energy and therefore resulting in more greenhouse gas emissions and financial burdens. The idea of urban compaction has been long proposed and promoted to address these problems (Echenique et al., 2012). While its role and function are widely recognized both theoretically and practically in urban planning, there are still rare successful cases of such implementation in the United States.

To better understand how land-use and transportation policies can help with the compaction, urban models (e.g., gravity-based models, econometric models, spatial input-output models, and microsimulation models) might be used to evaluate these policies. Because some of them have been successfully developed for forecasting future developments and widely used in many cities across the world (Waddell et al., 2003). This study uses a classic gravity model, TELUM (Transportation, Economic, and Land-Use Model) to examine to what extent a land-use or transportation policy must be developed and regulated to make the urban compaction occur in a typical auto-dependent city, Fresno, California. This model is selected because of its ability of allocating future developments subject to land availability and transportation impedance which could be specified based on the design of corresponding policies (Wang et al., 2017).

Five land-use and transportation policy scenarios are considered for the promotion of compact urban development: BL, L1, L2, T1, and T2. The BL (baseline) is a natural growth scenario based on the assumption that without any policy interventions, the city will inevitably expand outward due to the lack of available vacant developable land within the city boundary. For land-use policies, the L1 (high-density zoning) scenario increases the availability of vacant developable land in the urban core areas to certain extent. The results show the urban compaction would occur and complete the process in the next 30 years. On top of the L1 scenario, the L2 (growth boundary) scenario sets up growth boundary by adopting a zero-development policy in the rural areas. The results suggest that this policy speeds up the process of urban compaction and makes the city more compact as compared to the L1 results.

The transportation policy scenarios are developed on top of the L2 scenario. The T1 (locational impedance) scenario decreases travel cost in the urban core areas and increases that in the rural areas. The results reveal that this policy essentially creates transportation barriers among the urban core, suburban, and rural regions. Future activities would tend to occur in their own regions. The urban core areas will attract more future developments because of a lower travel cost and stronger local economy. The developments will drop in the suburban areas for a weaker economic body. The rural areas will see more developments when the local economy becomes mature. The T2 (carbon tax) scenario is to punish long travel across the region. Therefore, future activities would happen nearby, resulting in spatial autocorrelation. The results will break the smooth spatial pattern and produce an
uneven distributed one. In a word, the goal would become to make a compact multicentric city from a compact monocentric one. This spatial pattern might empirically suggest the application of the TOD (Transit Oriented Development) idea, which connects those small-area clusters with a complete transit network. This study not only adds to the literature on urban modeling but also contributes to the practice of smart growth or new urbanism policies for sustainability.

Citations


Key Words: Urban compaction, Urban models, Land-use policy, Transportation policy, Sustainable development

ENVIRONMENTAL BENEFITS OF DOCKLESS BICYCLE SHARING FOR COMMUTING TRIPS: EVIDENCE FROM SHANGHAI, CHINA

Abstract ID: 465

Individual Paper

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To tackle the significant challenge of global climate change, many cities are striving to achieve carbon neutrality by promoting the usage of low-carbon transport modes. In recent years, dockless bicycle-sharing system (DLBS) has emerged as a popular mode for travel in many cities around the world, particularly in China. Understanding the environmental implications of DLBS is thus crucial for the carbon-emission-reduction efforts of cities and the design of policies in regulating DLBS.

The environmental benefits of DLBS can be measured by the difference in carbon emissions between the actual DLBS trips and the counterfactual mobility choices of DLBS users assuming DLBS was unavailable. Therefore, the key factors in assessing the environmental benefits of DLBS include: 1) the scale of DLBS usage, and 2) the modal shift behavior of users after DLBS entered the market. Existing studies mostly use either small data or big data in assessing the role of DLBS in car emission reduction. Small data such as travel surveys can reveal DLBS users’ mode choice before and after switching to DLBS, but cannot reflect the overall scale of DLBS usage. GPS-based big data on DLBS trips provide detailed spatiotemporal information on individual DLBS trips, but face the challenges of inferring the counterfactuals of DLBS trips.

In this study, we develop a new method that combines big data and small data in estimating the carbon-emission-reduction effect of DLBS, using Shanghai, China as an example. Based on a user survey, we calibrate a multinomial logit (MNL) model to discern the major laws that govern the modal-shift behavior of shared bicycle users. We apply the calibrated model to a big dataset of GPS-based DLBS trips of the largest operator in Shanghai in one
month to infer the counterfactual mobility choice of individual shared bicycle trips. We estimate the carbon emission of individual trips (both factual and counterfactual) using the carbon emission factors calculated by Life Cycle Analysis (LCA) model and derive the overall carbon-emission-reduction effect of DLBS at the city level. Unlike previous studies that mainly focus on the replacement of DLBS to other transport modes such as walking, public transportation (PT) and private cars, we also consider the complementary relationship between DLBS and other modes, particular PT in the analysis. Therefore, the carbon-emission reduction effect of DLBS in promoting PT by providing solutions for the first-mile/last-mile problem can be captured. We find that each DLBS commuting trip on average reduced carbon emissions by 188.41g and the overall carbon emission reduction in commuting trips amounts to 2.6 thousand tons in Shanghai for the working days in 2016.

This study also provides new evidence on the role of the built environment in promoting bicycle-sharing, both in terms of modal shift behavior and DLBS trip rates. Our MNL models on modal shift shows that for DLBS users, higher floor area ratio and lower building coverage are associated with higher probability of switching from private cars to DLBS, while better coverage of metro stations can facilitate the switch from private cars to PT-DLBS trip chaining. The results of OLS models on DLBS trip rates suggest that higher density, better coverage of metro stations, and proximity to the city center promote the usage of DLBS at the neighborhood level.

This study develops a new approach in assessing the environmental benefits of DLBS and provide new insights into the relationship between the built environment and shared bicycle usage. Our findings have significant policy implications for promoting bicycle sharing and reducing transport carbon emissions in cities.

Citations


Key Words: Dock-less shared bicycles, Carbon emissions, Built environment, Modal shift, Trip rates

CHRONO-URBANISM IN UNDER-INVESTED COMMUNITIES: A STUDY OF RESIDENT TRANSPORTATION EXPERIENCES IN CHARLOTTE’S CORRIDORS OF OPPORTUNITY

Abstract ID: 484
Individual Paper

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The City of Charlotte’s recently adopted Charlotte Future 2040 Comprehensive Plan envisions the creation of “10-minute neighborhoods” in which residents have access to the services and amenities they need on a day-to-day basis within a short trip of their home. Access to basic resources is necessary for economic mobility and to foster social capital, but available transportation options often limit access to these kinds of resources - particularly for lower-income households. Thus, increasing access to economic opportunities and levels of social capital, particularly for communities with fewer local resources and amenities, will require targeted transportation investments. Understanding the specific needs of under-resourced and historically marginalized communities (e.g.,
Latinx immigrants, senior citizens, etc.) could help to inform a more equitable implementation of Charlotte’s 10-minute neighborhood policy goal as well as similar chrono-urbanist policies being developed across the country. In this research, we focus on two communities located within Charlotte’s Corridors of Opportunity (Sugar Creek and Charlotte East), areas that have historically received little public investment.

In the proposed research, we gather resident stories to answer the following questions: 1) what kinds of basic services and amenities do residents of Charlotte’s Corridors of Opportunity most need to access?; 2) what transportation barriers to achieving that access currently exist?; 3) and what kinds of interventions could help to improve access? We conduct 30 in-depth interviews with study area residents to answer these questions from the perspective of resident experience. This proposed research is important considering the recent growth in the adoption of chrono-urbanism policies in U.S. cities and around the world. By approaching the 10-minute neighborhood concept from the bottom up and gathering resident stories, we share alternative narratives in order to compliment and inform the implementation of 10-minute neighborhoods as envisioned by Charlotte’s 2040 Plan as well as policy development in Charlotte and other U.S. cities. Findings demonstrate that low income residents, senior citizens, Black residents, and Latinx immigrants do not live within 10-minute neighborhoods and drastic measures would have to be taken to accommodate the needs of vulnerable residents who could greatly benefit from chrono-urbanism. Findings also highlight stark differences between the City’s target metrics for 10-minute neighborhoods and the ideal services and amenities desired by interviewees, which include safer and more convenient access to laundromats; social services; immigration and social security offices; grocery stores; and medical facilities.

Citations


Key Words: chrono-urbanism, walkability, connectivity, transportation, equity
motor vehicle crashes or injury from motor vehicles as they enter and exit their own vehicles to make deliveries. Despite this sector’s increasing importance, however, an understanding of how these circumstances affect their propensity for occupational injury and fatality remains underdeveloped. A better understanding of this industry—particularly in terms of change over time—is crucial, especially as eCommerce grows and the landscape of parcel delivery remains in flux.

To gain insight about these developing patterns, this project examines two major sources of occupational hazard data in the US. The first source consists of occupational surveillance data maintained by the Bureau of Labor Statistics, including the Survey of Occupational Injuries and Illnesses (SOII), which tracks injuries and illnesses, and the Census of Fatal Occupational Injuries (CFOI), which tracks occupational fatalities. We also analyze data from the Injury Tracking Application (ITA), maintained by the Occupational Safety and Health Administration (OSHA). Using these resources, we establish recent trends in injury and fatality figures among this industrial subsector, while identifying potential shortcomings in the currently available data.

Specifically, we address the following two questions:
1. Given available data, what picture can we paint of trends in courier/delivery driver safety?
2. What shortcomings exist in this data landscape (and what should change)?

In terms of major injury and fatality patterns, we revealed a few broad insights. First, the number of injuries sustained by Couriers and Messengers (the NAICS code representing drivers) has been continuously on the rise over the past decade or so. Examination of injury rates, however, suggests a substantial component of this increase has been the growth of this industry, with more employees working more hours to deliver more packages. Nevertheless, these rates have crept upward. This trend is especially pronounced in the subset of industries tracked by the ITA—a subset more likely aligned with parcel delivery drivers than the more inclusive SOII sample—denoting a potentially worrying injury trend as this industry grows. Evidence of increasing danger while performing these jobs reinforces earlier calls for additional scrutiny of working conditions that continue to threaten workers who operate at the curb.

It is more difficult to establish a trend in fatalities, given the relatively small number compared to injuries, but our analysis reveals there are nonetheless a substantial number of fatalities each year. The significance of these fatalities is highlighted when considering common causes of injury and fatality. While the far greater number of injuries are caused by continuous workplace exposures to things like repetitive strain and equipment, fatalities were almost exclusively caused by transportation incidents. This point likely entails that the subset of injuries caused by transportation incidents may be substantially more severe than others and highlights the danger the nation’s transportation system continues to pose to many of its users, including those carrying urban freight.

Finally, we analyze disparities between parcel carrier companies and key demographic characteristics of drivers experiencing injuries. While we find evidence of differences between carriers, we find above all that current data capture and dissemination practices make accurate analysis difficult. This difficulty is especially pronounced in trying to parse factors like race. We therefore recommend potential data and policy changes as well as further research.

Citations


Key Words: traffic safety, crashes, parcel delivery, occupational hazards, injury data

CHOICE, PREFERENCE, SATISFACTION, AND ACCESSIBILITY: INVESTIGATING THE INTERRELATIONS OF TRAVEL MODE ATTRIBUTES
Abstract ID: 493
Individual Paper

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Understanding travel attitude, behavior, and satisfaction is key to develop strategies that induce the use of sustainable transport modes and improve subjective well-being (Ettema et al., 2010; St-Louis et al., 2014). While many studies focus on the bidirectional relationship between travel attitudes and behavior, few have included the notion of desire to use a specific mode (De Vos, 2018). Our study expands on De Vos et al. (2021)’s conceptual model of desire and preference in mode use in two ways. First, we investigate the personal characteristics and built environment factors that make a person a dissonant traveler (travel with a mode different than their preferred mode) or consonant traveler (travel with a mode that is their preferred mode). Second, we measure the difference in travel satisfaction between dissonant and consonant travelers in their commute to work. Our commute to work, travel satisfaction, personal characteristics, and preferred mode information comes from the Montreal Mobility Survey (MMS). MMS is a large-scale bilingual online travel survey administered in the Greater Montreal Area in Canada in Fall 2022. Only those who commuted to work by active travel (walking or cycling), public transit (metro, bus, BRT, or commuter rail), and car (driving, ride hailing, or carpooling) were considered for the analysis (N=1,881). We calculated the regional accessibility to jobs by public transport and car using the r5r package in R and collected Walk Score® data using an API from walkscore.com to account for local accessibility. Our preliminary statistical analysis showed that increasing regional and local accessibility will have a positive effect into shifting travel preference from the car to more sustainable modes. A similar result can be achieved through decreasing travel time by public transit for dissonant automobile users. The second part of our analysis showed that both consonant and dissonant travelers have relatively high levels of satisfaction with their commute (ranging from 3.27 to 4.30 on a 5 points Likert scale). Consonant travelers using active transport (cycling and walking) enjoy the highest level of satisfaction (4.30) compared to all other travelers with the built environment playing a mediating role. These results suggest that changes in the transport system and the built environment can be correlated with preference towards using sustainable modes. A better understanding of the effect of mode preference on satisfaction will help inform public policies aiming to shift commuters to more sustainable modes and enhancing subjective well-being.

Citations

VARYING INFLUENCES OF THE BUILT ENVIRONMENT ON HOUSEHOLD TRAVEL IN THE UNITED STATES - AN UPDATE WITH 36 DIVERSE REGIONS AND MACHINE LEARNING ANALYSIS

Abstract ID: 498
Individual Paper

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The influences of the built environment on household’s travel behavior have been studied for decades because of the wide applications of people’s travel behavior in the crises that our society is facing today–climate change, public health, and social equity. First, in the highly auto-dependent built environment in the United States, 82.6 percent of person trips are made by driving private vehicles according to the 2017 National Household Travel Survey (NHTS). The transportation sector generates 38 percent of the total US greenhouse emissions, which is the most from any sector of the economy (Congressional Budget Office, 2022). Second, the way people travel affects their long-term health outcomes. Certain modes of travel involve physical movements, such as walking, biking, and even taking public transportation, and can contribute to people’s daily need for physical activity (Ewing et al., 2003). Third, a highly auto-dependent built environment also creates social inequality and environmental injustice. People who live car-free, prefer active travel, or cannot afford car ownership lack access to opportunities (jobs, education, social resources, etc.). Yet, often time, they are more likely to live in neighborhoods that suffer from traffic noise, pollution, and climate related disasters.

Most studies in literature agree that people’s travel demands and choices can be moderated through changing the built environment. However, there are still questions and debates in many details. Studies argue planners and policymakers cannot do much due to travel demands and choices are mainly the product of people’s socioeconomic status (Stevens, 2017). Even they can, the following question is whether the same amount of effects can be expected in different urban contexts? For example, can the same amount of vehicle miles traveled (VMT) reduction be expected by doubling population density at low density neighborhoods and high density neighborhoods? This is known as nonlinear and threshold effects related to neighborhood (Galster, 2018).

By building upon an earlier study (Ewing, et al., 2015), this study contributes to the current literature in the following three ways. First, it more than doubles the number of regions studied and provides more generalizable findings from the increased regional sample size. Second, it examines to what extent the combined effects of the built environment surpass sociodemographic effects. Third, it explores the effective ranges which maximize the influences of the built environment on household travel behaviors. This study employs machine learning methods to analyze one million trips generated by over 100,000 households in 36 diverse (small and large, sprawling and compact, etc.) regions in the US. It advances current knowledge on the effects of built environments on travel behavior. It helps promote an environmentally friendly, healthy, and equitable built environment and society.

Citations
Transit-oriented development (TOD) has gained increasing popularity to encourage sustainable development and realize its environmental, economic, and social benefits. However, social equity has historically played a minor role in TODs than stimulating economic growth and reducing greenhouse gas emissions (Guthrie, 2018). The social equity implications of TOD are the product of both market forces and public sector actions. As private developers play an increasingly significant role in facilitating TODs, it is critical to examine the responses of public sectors in promoting TODs, especially in achieving equitable TODs, which are underrepresented in the literature. Furthermore, there have been growing concerns about gentrification and displacement induced by market-driven TODs in recent decades. Indeed, the variation in the findings across different metropolitan regions highlights the importance of regional context and local government policies in achieving equitable development in transit-served neighborhoods. However, the extent to which TODs promote equitable developments in specific local and regional contexts is yet to be explored.

In light of these concerns and gaps, this study examines the extent to which local governments in the Southern California region promote equitable development in TODs through development regulations and policies. It uses a multiple-case study approach, following the guidelines suggested by Yin (2018). It studies 19 rail-based TOD specific plans—development regulations and policies that apply to transit-adjacent areas within cities to implement goals and objectives included in the cities’ general plans and facilitate developments around transit stations. These specific plans are adopted by 19 incorporated cities in the Southern California region to promote TODs. Next, the study uses the equity-oriented criteria proposed by the American Planning Association (2019) and the operationally defined criteria included in the LEED-ND (Leadership in Energy and Environmental Design for Neighborhood Development) rating system, as the analytical framework, to determine whether and to what extent these targeted TOD specific plans address the selected criteria that evaluate both the general quality and equity-focused quality of TOD plans (Garde, 2017; Loh & Kim, 2021).

The findings show that local governments in the Southern California region facilitate equitable TODs in different approaches. However, equity is not a guiding principle in local TOD planning since the majority of specific plans do not mention equity or identify underserved areas or populations. In addition, providing affordable housing units and increasing the share of land for multifamily housing near transit stations are two common strategies adopted by cities to facilitate equitable TODs. However, there is considerable variation in the extent to which local governments adopt these two strategies.
Further, the study also uses one-way analyses of variance (ANOVA) to determine whether the extent to which local governments support equitable features of TODs is associated with the characteristics of cities and transit stations. The findings show that cities with lower median household income, a larger concentration of non-white populations, and higher population density are more likely to facilitate equitable development in TODs to a greater extent.

Overall, the study emphasizes the necessity of examining TOD regulations and policies with a focus on social equity. The findings of this study could provide insights into the strengths and weaknesses of existing policies in facilitating equitable TODs and possibly explain the variation among different municipalities in the same region. Other metropolitan regions and cities promoting TODs would benefit from the evaluative methods and findings of this research to achieve more equitable TODs.

Citations


Key Words: Transit-Oriented Development, Social Equity, Local Government, Southern California

ARE OLDER ADULTS LIVING IN SMALL TOWNS READY FOR AUTONOMOUS PUBLIC TRANSPORTATION? QUALITATIVE EVIDENCE FROM NOLANVILLE, TEXAS

Abstract ID: 509
Individual Paper

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By 2050, adults aged 60 and over will reach about 2.1 billion, or 22 percent of the global population. This rapid growth in the number of older adults presents a significant challenge for transportation. The aging population requires diverse travel options, social services, and healthcare. Furthermore, mobility and safety are essential for older adults to use public facilities and services. Transportation barriers pose a significant threat to their health and well-being. In order to address these issues, efforts are being made to improve public transportation networks to cater to older adults’ needs. However, the high operational costs of traditional bus systems have forced many cities to scale down services.

Autonomous driving technology in bus systems is expected to reduce operating costs while enhancing mobility and safety for older adults. Integrating autonomous driving technology with public transportation is poised to create fresh opportunities for outdoor activities among older adults. Nevertheless, the literature on autonomous public transit (APT) is still scant, particularly in the context of older adults living in small, underserved communities.

We fill this gap by exploring the demands of older adults for APT in Nolanville, Texas (pop. 6,249 in 2021). We carried out in-person interviews with ten older individuals at the city hall in Nolanville with the goal of gaining
insights into their perceptions and concerns regarding APT. The data collected from these interviews were analyzed using Colaizzi's method of phenomenology.

The exploratory findings of the study provide valuable insights into the demands of older adults for APT. Thematic analysis revealed that the adoption of APT could enhance community involvement and contribution to the physical and mental well-being of older adults. We also found that as older adults experience a decrease in mobility, their demand for APT services tends to increase. Furthermore, older adults who are more knowledgeable about autonomous vehicle (AV) technology tend to have higher demands for APT services. Major concerns about implementing AV technology on public transportation include individuals’ mobility and safety issues. Providing attendant services to older adults may alleviate some concerns about these issues. But to fully address their concerns, pilot programs are needed to offer them hands-on experience with AV technology.

Citations

• Mattson, J. (2012). Travel Behavior and Mobility of Transportation-Disadvantaged Populations: Evidence from the National Household Travel Survey.

Key Words: Public Transportation, Autonomous Vehicles, Healthy Ageing, Older Adults, Outdoor Mobility

MOVING TOWARD MULTIMODALITY: EXAMINING FACTORS INFLUENCING THE CHANGES IN MODE CHOICE USING DISCRETE CHOICE MODELS

Abstract ID: 519
Individual Paper

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Individuals' travel behavior has been becoming more complicated as they incorporate multiple activities into a single journey between the origin and final destination (McGuckin et al., 2005; Schmöcker et al, 2010). It is a growing phenomenon and is becoming a significant part of individual’s daily travel since multiple-destination trips potentially lead to greater time efficiency given the time constraints (Noland and Thomas, 2007). However, it is typically associated with decreased flexibility that attracts car users to switch to public transit and active transportation (walking and cycling), so it is considered a potential barrier to multimodality. The term ‘multimodality’ refers to a phenomenon of an individual using more than one mode in a single journey (An et al., 2022), while the opposite is called ‘monomodality’ (Meh dizadeh and Ermagun, 2020).

Many existing studies have argued that encouraging multimodality would be expected to be beneficial to sustainable cities because of its positive effects such as traffic congestion reduction, greenhouse gas (GHG) emission reduction and energy consumption reduction (Heinen and Ogilvie, 2016; An et al., 2023). However, despite these useful insights, several empirical studies observe relatively little multimodal travel behavior (Heinen
A significant barrier to multimodality is considered the gap between destinations and transit systems, called the first and last mile (Mehdizadeh and Ermagun, 2020). However, there are not many empirical studies investigating the links between neighborhood-built environments at origin, intermediate point and destination and individual’s mode choice. Within this consideration, this study aims to explore the multimodality, and factors affecting their mode changes from car to transit or walking/cycling. In particular, we examine the effects of neighborhood-built environment (or infrastructure) characteristics at the origin, intermediate point, and destination on mode choice.

This study mainly utilizes the detailed individual-level data from the 2017 National Household Travel Survey California Add-on (2017 NHTS-CA). With a focus on multiple-destination trips, we first estimate the mode choice probabilities based on total travel time and cost using a discrete choice model. We focus on two types of car users such as monomodal car users and multimodal car users, and the mode choice set consists of three types: (1) only car, (2) from car to transit, and (3) from car to walking/cycling. To extend the first analysis part, we include attributes of the origin, intermediate point, destination, and individual-specific variables. Using a discrete choice model, we first examine the factors affecting their mode changes from car to transit or walking/cycling. We then test multiple scenarios that show the potential effects of neighborhood-built environment (or infrastructure) characteristics on current mode choice probabilities using a base model.

Preliminary results indicate that attributes of intermediate points play an important role in mode changes from car to transit and walking/cycling. For instance, transit stations and parking lots within 400-meter buffers at intermediate points make individuals change their mode from car to transit or walking/cycling. In addition, individuals are more likely to have multimodal travel behavior as the car’s travel time and cost increase. For instance, increases in the car’s travel costs with tolls and parking fees are more likely to choose multimodality instead of monomodality.

As many existing studies argue the benefits of multimodality, increases in mode changes from car to transit or walking/cycling can help reduce traffic congestion, GHG emission, and energy consumption. Therefore, the findings of this study will provide empirical evidence on how neighborhood-built environment (or infrastructure) characteristics affect individual’s mode changes, which may help promote sustainable transportation planning.

Citations


Key Words: Multimodality, Mode Choice, Discrete Choice Model, Mixed Conditional Logit Model

MARYLAND’S REMOTE WORK LANDSCAPE: CHARACTERISTICS, COMMUTING BEHAVIORS, AND POTENTIAL VMT REDUCTIONS

Abstract ID: 542

Individual Paper

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The COVID-19 pandemic has brought about a notable shift in commuting patterns, with many workers now opting for hybrid and remote work arrangements. While some have resumed their pre-pandemic in-person work routines, a significant number have adapted to telework, which allows them to travel less frequently or even eliminate travel altogether. This unprecedented move towards remote work across a wide range of industries is expected to have long-term implications for state and local agencies as they plan for the transportation needs of the population. As such, it is important to understand the factors that influence the adoption of remote work and the associated impacts on travel demand in order to inform policy and infrastructure decisions.

This study offers a comprehensive understanding of the characteristics of populations with varying levels of telecommuting and presents distinct profiles of commuters. In addition, it estimates the potential vehicle miles traveled (VMT) impacts of high remote work levels on statewide travel demand. The study draws on data from the 2022 Maryland Commuter Survey (MCS), which was conducted by the National Center for Smart Growth for the Maryland Department of Transportation. The MCS surveyed adult workers throughout the state, collecting key information on commuting behavior, transportation resources, demographics, attitudes, and priorities. The sample well represents the statewide population of adult workers, based on factors such as gender, age, race, ethnicity, and urban-rural balance.

This study used logistic regression and a K-means cluster analysis to examine the characteristics of workers with remote, hybrid, and in-person schedules with different work activities, industries, and workplace types. It showed that telework encompassed a diverse range of skills and activities beyond traditional office desk jobs, highlighting the need for a more elastic interpretation of telework adoption across the professional scene. Additionally, a K-means cluster analysis was used to classify Maryland workers based on commuting and work characteristics, revealing four distinct types, which we called flourishing families, wireless white collars, blue collar commuters, and seasoned professionals. These types exhibit varying degrees of remote work propensity, with flourishing families and seasoned professionals demonstrating a preference for hybrid schedules, wireless white collars opting for fully remote work, and blue collar commuters primarily working in person. Notably, each type exhibits unique individual and household characteristics, employment attributes, commute behaviors, and job industries, underscoring trends in who is more likely to choose or be able to work remotely. Finally, the findings have substantial implications for travel demand and suggest that remote work may be cutting vehicle miles traveled (VMT) within the state of Maryland by as much as 17%. Hybrid work schedules may not offer substantial VMT savings compared to traditional in-person work arrangements because hybrid workers, though commuting less often, tend to live farther from their jobs. However, fully remote work emerges as a promising strategy for reducing VMT.

Overall, this study contributes to a growing body of research on telecommuting and its impact on travel demand, while also offering important insights into the unique commuting behaviors and characteristics of workers in the DMV (District of Columbia, Maryland, and Virginia) area, which is home to a large number of federal workers as well as a thriving knowledge economy with a significant presence of technology and healthcare companies. The findings of the survey indicate more than two-thirds of Maryland workers work remotely to some extent, a statistic that underscores the need for policymakers, transportation planners, and businesses to put telework adoption at the forefront of short- and long-term efforts to foster sustainable and efficient transportation options in a rapidly changing work landscape.

Citations


Key Words: Telecommuting, Hybrid work, Commuting behavior, Travel demand, Cluster analysis

EXPLORING THE POTENTIAL OF AUTONOMOUS VEHICLES IN SOLVING PUBLIC TRANSIT’S FIRST-MILE PROBLEM: A STATED PREFERENCES SURVEY IN EL PASO, TEXAS

Abstract ID: 544
Individual Paper

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The decline in public transportation ridership in many American cities in recent years, is due to, among other things, the First-Mile problem (i.e., transit stops being farther than practical for walking and/or biking). This is a major challenge due to low-density, sprawling development patterns common in much of the US. One potential solution exists – the use of autonomous vehicles (AVs), which do not require a human driver and can serve as shuttles to connect passengers to nearby transit stops. Policy makers have shown increased interest in using AVs as an innovative solution to the nation’s public transportation problem. However, due to technology, funding, and other challenges, there have been limited studies and pilot projects that explore the potential of using AVs to increase transit use.

This study aims to fill this knowledge gap by estimating the potential increase in the number of transit trips in a hypothetical situation (using a stated preference survey) where passengers’ first-mile problem is eliminated. The study setting (September 2018–August 2019) was El Paso, Texas, where 81.5% of the residents are of Hispanic origin, and the median household income is $48,866. Respondents first reported their typical weekly number of trips fulfilled by the Bus Rapid Transit (BRT) and regular buses for the following trip purposes: Work or work-related activities, personal or family errands, leisure or social, exercise or sports, and others. Respondents were then presented with a hypothetical scenario in which a free shuttle service is available between their home and the nearest bus stop (with passenger pickup estimated within 5 minutes of request), while everything else remained the same. Respondents reported the number of transit trips they intend to make under this scenario.

A total of 1,282 respondents provided complete trip data. Before the hypothetical intervention, a respondent reported an average of 1.77 transit trips/week, including 0.64 trips for work, 0.60 for daily errands, 0.35 for leisure or social, 0.11 for exercise or sports, and 0.09 for others. Under the hypothetical scenario, a respondent would make 7.43 additional trips by transit (an increase of 420%), including 2.86 additional trips for work, 1.89 additional trips for daily errands, 1.58 for leisure or social, 0.89 for exercise or sports, 0.21 for others. Respondents also seem
more likely to take BRT than regular buses under the hypothetical scenario, with an additional 4.57 trips for BRT compared to only 2.86 additional trips for the regular bus.

We examined the implications of first-mile coverage on different populations. Respondents 65 years or older would make an additional 4.05 trips per week under the free shuttle scenario, an increase of 258% compared to the 1.57 trips in the baseline (lower than the 420% increase of an average respondent). Additionally, participants who did not make any transit trips at baseline would make 6.70 trips per week, including 3.99 BRT trips and 2.71 regular bus trips. We carried out pair-sample t-tests for each of the above trip variables and concluded that the difference between the hypothetical scenario and the baseline is highly significant for all tested variables.

This study provides suggestive evidence that, by addressing the first-mile problem, innovative solutions like AVs complement the existing public transit system and unleash a considerable amount of travel demand.

Citations


Key Words: first mile problem, public transit, autonomous vehicles

WHAT DOES A CARING PUBLIC TRANSIT SYSTEM LOOK LIKE? VISIONS OF TRANSIT JUSTICE FROM THE PERSPECTIVES OF IMMIGRANT WOMEN

Abstract ID: 549
Individual Paper

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The objective of our paper is to investigate transit (in)justice in care-related public transit trips. We approach the topic from the perspectives of newcomer immigrant women, who are among core transit riders (or those who rely on transit daily). The transport system is key in carrying out reproductive labour (e.g., transporting dependents, accessing a grocery store, etc.), or what is referred to as ‘caretaking trips’, or the broader term ‘mobility of care’. However, caretaking trips have largely gone unrecognized in the planning of transport systems because a) transport systems in North America have historically been designed to accommodate home-to-work journeys, and b) caretaking trips are typically undocumented or are hidden under leisure or personal trips in transportation surveys. The issue is highly gendered, in that women continue to conduct the majority of care trips, and intersectional, as racialized and classed women commonly have few other feasible mode options besides public transit.

Using in-depth semi-structured interviews, we specifically ask participants to (a) describe their daily transit experiences, (b) reflect on their everyday life on transit (e.g., in what ways are travel decisions based on choice and/or circumstances?), and (c) envision daily travel without the systemic constraints they face to inform future urban transit planning and policy. We draw inspiration from the work of Beebeejaun and literatures on everyday
life and reproduction to engage with the right to everyday life for newcomer immigrant women. Lefebvre critiques Western philosophers for excluding daily life from knowledge and wisdom. The everyday is often seen as ‘mundane’, ‘banal’, and ‘unworthy of reflection’, and “people in general do not know their own lives very well”. The everyday is thus ‘planned’ and ‘programmed’ by those in positions of power that seek to control everydayness through capitalist modes of production.

Drawing from this, in our view, the right to everyday life is a right to be able to, first, reflect on everydayness, and second, shape institutions in a way that accommodates what people value in everyday life. In linking this perspective to transit justice, we believe the formulation of justice must not only be defined deductively (i.e., from universal principles by theorists), but also inductively (i.e., by those experiencing injustice), through the ‘routinized’ (and struggles of) everyday life as a vantage point in criticizing formal structures of capitalism. Moreover, in aligning with perspectives that define justice beyond fairness, we frame justice in transit using mobility justice and capabilities approach. In this way, we re-orient the formulation of justice back to users, while defining movement as a capacity and conceptualizing a just transit system as the enabler in pursuing the things people value in life.

We conduct this research in Waterloo Region (population of about 620,000), which is a growing mid-sized urban region about 100 kilometres west of Toronto, Canada. Although Waterloo has a reasonably well-developed public transit system, its emerging social geography suggests growing concerns of gentrification near a new light-rail transit system, while car-oriented development remains prevalent in other parts. Densification is beneficial from a transit perspective but also takes a particular form (e.g., high-rise condominiums) that contributes to displacement. The changes are pushing marginalized populations (e.g., newcomer immigrants) to the periphery, where public transit is less connected. The study of Waterloo offers important insights for urban research beyond the specific case as cities and regions grapple with the interconnected issues of social justice, public transit availability, affordability, and densification.

Citations


Key Words: right to everyday life, public transit justice, mobility of care, immigrant women, transportation planning

A RETROSPECTIVE ASSESSMENT OF TRANSPORTATION IMPACTS OF COVID-19

Abstract ID: 555
Individual Paper

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In March 2020, the COVID-19 pandemic led to society shutting down. Non-essential shops and activities were closed, many employees were working at home, and traffic disappeared. This proved to be an opportunity for
studying changes in transportation behavior. The economy looked poised to enter a major recession following mass lay-offs due to the closing of those activities that required in-person and out-of-home interactions. We discuss what most thought would happen early in the pandemic, with the ultimate (at least as of this writing) outcomes on transportation systems, policy, and behavior.

Some of the prognostications included reductions in crash and fatality rates, reduced transit use, air travel reductions, changes in the push towards autonomous and shared vehicles, an increase in active travel (walking and cycling), a shift towards online shopping for most purchases, and a large increase in working at home (i.e., telecommuting). If all these behavioral changes happened, the benefits of improved air quality and reductions in greenhouse gas emissions would be enormous.

We conducted two online panel surveys (via Qualtrics) to assess how behaviors in these areas changed through the pandemic in the State of New Jersey. One survey was deployed during Winter 2020/21 and the second during Winter 2021/22, both peak periods of the pandemic. We assessed changes in working from home, grocery shopping, cycling, walking, and attitudes towards street closures, specifically for outdoor dining. We also examined respondent views on the benefits of not commuting. Some key findings include:

Interventions like slow/open streets encouraged walking behavior, especially among those who did not walk much pre-pandemic
Street closures and outdoor dining engendered more positive reception than opposition
Around one third of workers worked from home during the pandemic, and many state that they will continue to
There is higher demand for flexibility to work from home than many employers are willing to provide
A large share of respondents saw benefits from not commuting, allowing them to engage in other activities.
There was a reported increase in recreational cycling, but not for commuting; those who work at home report
some increase in walking activity. We conclude by interpreting these findings in the context of other changes (or lack of changes) in transportation behavior. We discuss the key lessons for planners and how beneficial changes can be made permanent.

Citations


Key Words: COVID-19, Transportation behavior, Active travel, Working from home
HOW THE PANDEMIC AFFECTED THE MOBILITY OF PEOPLE WITH DISABILITY: A CLUSTER ANALYSIS OF ACCESSIBLE TAXI TRIPS AND USERS IN TORONTO, CANADA

Abstract ID: 558
Individual Paper

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People with disabilities (PWD) represent the largest minority group in Canada (Statistics Canada, 2017). They often face mobility difficulties and require additional support while travelling. Studies have shown that PWD also face socio-economic difficulties, such as living in socially deprived areas and earning lower incomes than those who are able-bodied (Bezyak et al., 2017; Park et al., 2023). Despite this, policymakers and planners often overlook PWD, which contributes to the perpetuation of travel barriers and transport-related social exclusion. Public transportation has the potential to enhance accessibility for PWD, but the lack of understanding of who is using paratransit services and how they are using them makes it difficult to assess the social impact of these projects.

One key reason for this knowledge gap is that the persistence of ableism within mainstream planning research and practice allows for the needs and voices of PWD to be regularly overlooked (Terashima & Clark, 2021). While a few studies have acknowledged that PWD have a different travel behaviour compared to able-bodied individuals (Oliver, 2013; Terashima & Clark, 2021), little effort has been made to identify different PWD profiles and examined the impact of the COVID-19 pandemic on their travel behaviour. A better understanding of the travel behaviour of PWD is necessary to continuously improve the services being delivered, and to meaningfully assess paratransit policies and subsidies, especially as they pertain to social outcomes of accessible transport projects.

Building upon previous research that investigated the trip characteristics of accessible taxi services (Zhang et al., 2023), this study aims to understand the differences in travel behaviour amongst PWD who use accessible taxi services in Toronto, Canada. Specifically, our study engages three research questions: (1) how are individuals using accessible taxi services? (2) are there different groups of users based on their travel behaviours? And, (3) how have travel behaviours changed due to the COVID-19 pandemic?

The data for this study comes from Checker Taxi, a fully accessible taxi brokerage under contract with the City of Toronto’s paratransit agency, Wheel-Trans. Although operated as a private company, the service provided by Checker Taxi can be considered as paratransit service because rides are booked through Wheel-Trans, and trips are subsidized such that users pay the Toronto Transit Commission’s (TTC) normal transit fare. The dataset comprises approximately one million accessible taxi trips between June 2018 and June 2021. The study employs a cluster analysis to categorize users based on their travel habits and patterns, and examines the impact of the COVID-19 pandemic on their travel behaviour.

The results show that PWD tend to travel primarily on weekdays, and for health-related reasons. During the pandemic, there was a significant decrease in the number of PWD using accessible taxi services, particularly for those who only used the service occasionally. Additionally, the findings suggest that PWD who continued or started using accessible taxi services after the outbreak of the pandemic are more likely to be the most socially disadvantaged groups.

The study offers insights into the travel characteristics of several identifiable clusters of PWD based on mobility patterns, which can inform the development of tailored policies and services that enhance accessibility and inclusion for this segment of the population. Additionally, the findings contribute to the existing literature on addressing transport-related social exclusion in Toronto, which usually focuses more on population groups with low-income and affordability problems rather than different physical capabilities (Allen & Farber, 2019; Foth et al.,
2013; Roorda et al., 2010).

Citations


Key Words: accessible taxi, people with disability, transport equity, cluster analysis

FAIR DISCOUNT: RECENT TRENDS IN TRANSIT PRICING IN THE U.S.
Abstract ID: 564
Individual Paper

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Transit operators have historically been reluctant to adopt innovative fare policies due to equity concerns, a firmly-established history (in the United States) of flat-rate transit fares, and risk-averse transit management (Yoh, et al., 2010). “Flat” fares may seem equitable at first blush but charge different travelers the same price ($0.00) for trips of different lengths, modes, and time of day, effectively cross-subsidizing longer, more expensive-to-provide trips with revenues from shorter, less-expensive-to-provide trips (Nuworsoo, et al., 2009). Given that higher-income transit users tend to take longer trips than lower-income users, and are more likely to travel in peak periods and directions as well, flat fares cross-subsidize the better-off by the less well-off, on average. Fare schedules that charge different fares to different user groups based on ability to pay can help mitigate vertical equity concerns, while distance-based fares that vary by trip distance and/or time-of-day do a better job of matching the price charged for transit service to the cost of serving that trip (Farber, et al., 2014). Other factors influencing the cost of trip provision include the mode of transit used, passenger counts, vehicle load factors, and the specific characteristics of the urban area being served. The complexity of calculating marginal costs of serving specific transit trips has historically been magnified by a lack of individual transit user travel data. This situation is changing as real-time individual-level travel data become increasingly available and declining farebox revenues, coupled with restrictions on the use of federal transit funds for operating expenses, incentivize transit agencies to better match the cost of providing transit with revenues received. Although Los Angeles Metro and other operators around the U.S. expressed interest in experimenting with fare-free transit before the current pandemic as a response to longstanding structural issues stemming from over-reliance on flat fares, it took the unforeseen exigencies of COVID-19 to incentivize rapid widespread experimentation in fare policy. Coupled with reduced patronage, however, experiments in fare-free transit have exacerbated long term declines in the share of transit agency costs covered by fare revenues.

In this paper, I analyze COVID-inspired experiments with fare-free transit in the context of pre-COVID trends in transit pricing in the U.S. I analyze notable case studies of fare-free transit accompanying the beginnings of the COVID-19 pandemic, including Los Angeles, Kansas City, and Boston. I examine the political-economic context underlying the implementation of free fares in each case. I compare the financial and service performance of each agency before and after implementing free fares. I also identify the implications for transportation and mobilities...
justice of these recent transit pricing experiments. In short, I am interested in understanding, based on recent policy experiments, the social and financial opportunities and costs accompanying implementation of fare-free policies in large U.S. cities, where such programs have long remained a rarity.

I contribute to existing literature by summarizing important and visible recent examples of fare-free policies implemented by major U.S. transit agencies through both equity and efficiency lenses. This analysis allows me to take scholarly advantage of a rare natural quasi-experiment in transportation. The results of my analysis will be used to shape my ongoing research on contemporary transit fare policies. By better understanding how recent real-world experiments in fare-free transit in major transit markets in the U.S. affected the equity and efficiency of transit service, I endeavor to provide actionable guidance for transit agencies as they move toward fare policy reform in the age of COVID-19.

Citations


Key Words: Transit, fares, equity, policy

EXPLORING PEDESTRIAN ROUTE CHOICE PREFERENCES BY DEMOGRAPHIC GROUPS: ANALYSIS OF STREET ATTRIBUTES IN CHICAGO

Abstract ID: 571
Individual Paper

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Traditional transit accessibility models often overlook travel behavior and fine-grained transit characteristics experienced during first and last-mile walking. Existing models typically assume travelers choose the shortest walking path to minimize travel time, but studies suggest pedestrians do not always follow this pattern.

This study investigates pedestrian route choice preferences in Chicago, Illinois, using a diverse dataset of commute and returning home walking trajectories, collected from a smartphone application. We examine the impact of street attributes on route choice and compare how built environment factors influence preferences among different demographic groups. A path-size logit model with a constrained enumeration approach-based choice set is employed for analysis.

This study also addresses two gaps in pedestrian route choice research. First, unlike most studies that use data constrained to a particular study area or limited participant groups, our research employs a diverse dataset of actual walking trajectories covering a wide range of destinations and participant profiles. Second, we utilize GPS data, offering more accurate route choice analysis compared to questionnaire surveys. Surveys may suffer from recall bias and they may not capture route choice variability across different times and days.

Our findings indicate that factors such as distance, the number of amenities and establishments, sky visibility,
greenery, sidewalk presence, and park accessibility significantly influence route choice. While route distance and the number of establishments have a negative impact on preference, other factors positively affect route selection. To compare the effect of each variable across gender, age, and income, we have operationalized the coefficients using a ‘pedestrian effort index.’ This measure quantifies the perceived additional walking effort resulting from various route attributes, represented as an equivalent increase or decrease in walking distance. Our analysis shows that female pedestrians are more inclined to walk longer distances if sidewalks are more prevalent along the route. Conversely, male pedestrians are more willing to walk further when there is greater sky visibility. Similarly, individuals aged 34 to 64 years old exhibit a preference for walking longer distances with increased sky visibility. Notably, we found no significant variables influencing route choice among different income groups.

Citations


Key Words: Pedestrian route choice, Path size logit, Travel behavior, Walkability, GPS trajectories

ENHANCING HIGHWAY REMOVAL AND MITIGATION SOLUTIONS FOR SMALL AND MEDIUM Sized U.S. CITIES

Abstract ID: 575
Individual Paper

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Planning Issue: In the next six years, the US Department of Transportation (USDOT) will spend nearly $4 billion in discretionary grants on highways as authorized by the Bipartisan Infrastructure Act (Reconnecting Communities) and Inflation Reduction Act 2022 (Neighborhood Access and Equity Grant). For US cities these programs offer opportunities to redesign and rebuild sections of highways to meet 21st century needs. In recent years, highway engineers, planners, city leaders and other stakeholders have been strenuously advocating highway removal and mitigation programs that call for radical changes in inner city sections of highways, including converting highways to boulevards (H2B), tunneling, capping, and rerouting. However, little data or literature exists on how small and medium sized cities might undertake this effort.

Research Question: To fill this gap, this study asks: how can local leaders and stakeholders in small and medium sized cities to develop applications for highway mitigation that meet the criteria for available federal funding? It will address this question through a case study of Rochester NY (population 210,666) that completed a transformation of a 1.2-mile segment of its Inner Loop highway to a boulevard in 2017. The focus is on H2B that along with highway capping, is the most economic approach for small and median sized municipalities. This case is part of a larger study contrasting H2B and capping solutions.

Methodology: The case, whose study area includes the transformed boulevard and its census tract, has a mixed methods approach, reviews the project against current USDOT application requirements: (merit criteria, project readiness, and cost-benefit analysis), [1] uses ACS data from 2010-2020 and stakeholder interviews.

Findings
Preliminary findings (to be finalized this summer) are:
1. The project helped improve some demographic and economic impacts but also reduced the number of low-income minority residents.[2]
2. Property values rose.
3. The National Walkability Index ranked the neighborhood at the highest level.
4. The EJSCREEN indicated that the area’s air quality is much better than in other census tracts where the Inner Loop it still in its original form.
5. Interviews revealed low levels of community engagement, no community stewardship of the new area and a level of dissatisfaction with some of the design aspects of the new boulevard, mainly how wide it is and the lack of parks.
These findings suggest needed improvements in planning H2B projects, related to design, community engagement and stewardship,

Relevance to planning scholarship, practice and education: This study begins 1. to fill the gap in the literature about highway mitigation in the nation’s 19,000+ small and medium sized cities that have engaged in projects in the past, 2. shows the weaknesses of a key project type relative how USDOT defines best practices and 3. suggest how these places can improve in highway mitigation planning and design as they apply for federal grants under the 2022 legislation.


[2] Population increased by 26%, education attainment and property values rose but the number and proportion of low income Blacks decreased by xx % and xx% respectively such that low income Blacks are now 13% down from 29% in 2010.

Citations


Key Words: Highway Removal, Reconnecting Communities, Highway Capping, Economic Development, Environmental Justice

A NATIONAL INVESTIGATION ON THE RELATIONSHIP BETWEEN TRAVEL LANE WIDTH AND TRAFFIC SAFETY
Abstract ID: 576
Individual Paper

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There has been a constant competition for space in roadways’ right-of-way. In most American cities, automobile is the winner of this competition, making it a challenge to find space for bike lanes and sidewalks. Nevertheless, American cities have experienced an increasing demand for walking and biking in recent years particularly since the emergence of the COVID-19 pandemic, making 2020-2021 the biggest years for cycling since 1973. At the same
time, pedestrian and cyclist fatality rates have been increasing in the U.S, even during the pandemic despite a significant decline in traffic volume and car accidents.

These trends are most likely the result of poor pedestrian/sidewalk infrastructure and the lack of protected bike lanes. One of the easiest and most cost-efficient way to make space for cyclists and pedestrian is to narrow travel lanes and parking lanes to an optimal width. This adjustment in lane width could offer the opportunity to add dedicated bike lanes and wider sidewalks within the existing infrastructure.

The key questions are whether, and to what extent, the existing urban streets could be narrowed without compromising safety. More fundamentally, what is the relationship between travel lane-width and traffic safety and whether wider lanes are significantly safer. The most widely accepted AASHTO’s Greenbook recommends a minimum lane width of 12 ft. for high-speed and high-volume roadways and a minimum of 10 to 11 ft. for urban areas with heavy pedestrian activity (AASHTO, 2011). In practice, state design standards mostly exceed the AASHTO’s lane width minimum standards and exceed what is required for driver safety in low-speed environments particularly in urban areas with relatively higher pedestrian activity (Ewing, 2002).

Empirical evidence on the relationship between travel lane width and safety is mixed (Dumbaugh & King 2018). Also, neither existing guidelines nor road design standards are based on data-driven analysis. This could be due to the fact that the vast majority of previous studies have not accounted or partially accounted for roadside design characteristics of street sections mostly due to the lack of microscale data availability. Microscale data on street design elements are not available even to local and state governments and require an extensive data collection. As a result, there exists very few comprehensive studies focusing on the impact of lane width on safety and almost all of existing analyses have focused on small scale case studies.

This study is one of the most comprehensive data-driven national analysis of lane widths’ impact on traffic safety. We employ novel methodologies to collect data on microscale street design characteristics for street sections in four American cities including New York City, Philadelphia, Dallas and Denver, representing a diverse range of street networks and transportation infrastructure. We utilize Google Maps, Google Earth and Google Street view as well as local and state agencies remote sensing data to investigate the link between lane widths and traffic safety measures using hierarchical modeling to control for both city level and street level design determinants of safety including tree coverage, sidewalk, on-street parking, traffic calming measure and more. The findings of this study have immediate and direct policy implications, providing data-driven evidence for optimal lane width decision-making as a key component of context-sensitive solutions to street design.

Citations


Key Words: travel lane width, safety, walkability, street design
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Abstract: The development of metro systems has played an important role in facilitating sustainable travel, meeting the growing travel demand, and reducing automobile dependence and carbon emissions in megaregions. While empirical studies have demonstrated that metro expansion can increase metro usage in both the vicinity of new stations and throughout the entire city, scant attention has been given to investigating the spatial spillover effect of new lines on other areas through pre-existing metro stations. The spillover effect, in the context of a metro system, refers to the influence that the introduction or expansion of a metro network can have on the travel behavior and accessibility of individuals residing in nearby areas with pre-existing stations, beyond the direct impact of the system on its immediate surroundings. This study raises two research questions: (1) whether the metro expansion produces spillover effects on metro usage through pre-existing metro lines; and (2) whether the spillover effects between metro expansion and metro usage are unevenly distributed across the pre-existing metro lines.

This study employs a difference-in-differences (DID) research design to investigate the causal effects of the opening of the Metro Line 9 extension on metro usage at each station along the pre-existing Metro Line 9 in Shenzhen, China. Relying on a mobile phone dataset from China Union, we obtained records of the daily travel patterns of 123,672 individuals at 30 stations for two months before and after the opening day, December 8, 2019. The results suggest that the metro expansion significantly increases individuals' metro usage, rising from an average of 5.04 (km/person/day) to 5.16 (km/person/day) for residents in pre-existing metro stations located along Metro Line 9. Then, the spillover effect consistently decreases with increasing distance from new metro stations along the pre-existing metro line, declining from 0.71 (km/person/day) at the first station to 0.12 (km/person/day) at the sixteenth station, and disappearing after the seventeenth station. Furthermore, transfer stations can increase the spillover effect by an additional 0.05 (km/person/day), when compared to non-transfer stations. Ignoring the spillover effects could lead to biased estimates of the travel behavior change induced by metro transit expansion and misguide policy formation in metro transit planning, metro influence capture, and transit-oriented development.

This study makes two major contributions. First, in contrast to existing literature that primarily focuses on measuring changes in metro usage of individuals near new metro stations resulting from metro expansion, we examine changes in metro usage of individuals in areas that were already connected to the metro network. Second, we further explore the distance decay regulation of spillover effects between metro expansion and metro usage changes in the metro network. These findings suggest that previous studies may have underestimated the impact of metro expansion on metro usage change.

Citations

Key Words: metro expansion, metro usage, spillover effect, difference-in-difference research design, Shenzhen, China

EXPLORING THE EFFECTS OF MONETARY AND TIME COST ON TRAVEL MODE CHOICE: A STUDY OF TRANSIT AND RIDEHAILING IN CALIFORNIA
Abstract ID: 586
Individual Paper

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Ridehailing, provided by transportation network companies (TNCs), such as Uber and Lyft, has emerged as a popular travel mode in cities worldwide (Alemi et al., 2019). A growing body of literature explores the extent to which TNCs compete for ridership with other modes, and in particular what this means for public transit operators (Erhardt et al., 2022; Hall et al., 2018; Nelson and Sadowsky, 2018). Prior studies document drops in transit ridership following the entry of TNCs to a metro area. However, existing studies rely on event study designs, and rarely examine cross-price elasticities, or the extent to which TNCs act as a substitute for modes other than transit.

Using travel diary survey data from a survey by the San Francisco Bay Area’s Metropolitan Transportation Commission (MTC) targeting TNC users, we employed an alternative-specific conditional logit model to analyze how trip characteristics such as the time and monetary cost for each available option, as well as socioeconomic variables, influence traveler’s mode choices. From this model, we calculate marginal effects for both alternative-specific and case-specific variables to estimate cross-price and cross-time effects between travel modes. Our findings indicate that if we increase the travel cost of TNC by 10%, we expect TNC trips to decrease by 11.21%, holding all other regressors constant. About half of those riders would switch to driving, and one in five switch to transit. The results show that driving, rather than transit, is the closest substitute for TNC. We also examine how changes in transit time and money cost affect mode choice. We find that a 10% reduction in transit time leads to a 17.32% increase in transit trips, while a 10% decrease in transit cost only increases transit trips by 1.32%, holding all else constant. Consistent with previous studies on fare-free transit (King and Taylor, 2023), our results suggest that improving public transit efficiency is more effective in increasing transit attractiveness than promoting fare-free transit, at least among the survey population. To our knowledge, this study is among the first to calculate such cross-price and cross-time effects for TNC services and public transit versus other modes, adding a new dimension to the current understanding of traveler’s mode choices. These findings offer valuable insights that can inform policy implications for transportation planning and management.

Citations

Automated vehicle technologies vary from simple alerts to partially automated driving tasks that are increasingly available in today’s vehicles. Advanced driver assistance systems (ADAS) seek to alert a driver to critical events (e.g., forward collision warning) or even intervene (e.g., emergency braking, lane-keeping steering) to prevent crashes. These technologies, however, are not available equally across the passenger vehicle fleet (Voelk, 2020). Despite evidence for safety, only automatic emergency braking has recently received regulatory attention as a mandated technology. Instead, ADAS is named, packaged, and offered differently by each manufacturer, often billed as a driver convenience or luxury item rather than a potentially lifesaving one.

Safety-related technologies like forward collision warning systems and blind spot detection are highly effective when used properly (Cicchino, 2017) and are important for safety for both occupants and non-occupants like pedestrians and bicyclists (Combs et al., 2019). Considering the relative newness of these technologies, many used vehicles do not have ADAS. People with lower incomes, needing the car for access to services and upward economic mobility, are more likely to buy these used, “risky” older vehicles (Klein, 2020). Even in used cars equipped with one or more of these systems, information about and trust in ADAS is lower in used car buyers (Reagan et al., 2022). Combined with ADAS only being available on more expensive trim packages of new cars, lower income consumers are literally priced out of safety technologies sold as luxury items. Even consumers who might be able to afford the additional expense to opt into these technologies may not choose to, if those technologies are seen as a luxury rather than a necessity or are packaged with unwanted upgrades, thus limiting their widespread consumer use.

In this research, we conducted an inventory of the top selling models of the ten largest automakers in the US, Japan, and Europe to determine the availability of ADAS by vehicle type, model, and trim package. Our findings about the complex, varying, and often confusing ways that manufacturers package and price these safety technologies may provide insight into what role disparities in the availability of ADAS across the vehicle fleet may play in safety. For example, we found that safety technologies are less likely to be available on the lower-cost trim packages of larger vehicles in particular, despite the greater danger these vehicles represent to pedestrians and bicyclists. We also examined how manufacturers market these technologies to consumers. Thematic analysis and visual discourse analysis revealed explicit and implicit themes around luxury, power, family, convenience, techn-optimism, and status as often (or more) as safety.

There are multiple implications for these findings relevant to planning. As cities and towns consider “smart and connected” infrastructure, it is important to understand just who is able or incentivized to opt into the smart and connectable technologies that can help realize goals around safety and mobility. Addressing the alarming increase in traffic deaths, particularly of pedestrians, requires understanding how potentially life-saving technologies are marketed and sold. In the currently unregulated, unstandardized world of advanced driver assistance systems, access to safety is currently unequal and inequitable.

Citations


Key Words: transportation justice, automated driving systems, traffic safety

LEARNING FROM A CROSS-STATE ROAD SAFETY COMPARISON: SOURCES OF PEDESTRIAN AND BICYCLE CRASHES IN OHIO AND FLORIDA MAJOR METROS

Abstract ID: 602
Individual Paper

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Comparative urban road safety research has recently contrasted poor outcomes in the United States with better outcomes in European countries (Buehler and Pucher 2021). Such studies contribute to wider calls for the United States to learn more from the safety planning practices of other countries (Zipper 2022). Annual metrics on pedestrian and bicycle crashes, however, also show large variations in safety outcomes inside the United States itself, with far higher crash rates in southern and sunbelt cities (“Dangerous by Design” 2022). Yet with most crash research conducted through state departments of transportation, detailed cross-state comparative studies that would allow learning from these internal differences are rare. Only recently, did Schneider et al. (2021) analyze the highest pedestrian crash segments across the US finding more than half were in sunbelt states, which the authors considered to be due to a more sprawling mode of urban development in those states.

To engender learning from cross-state differences, this paper presents a comparative study of pedestrian and bicycle crashes between three metropolitan counties in Ohio and three metropolitan counties in Florida. It addresses the following research question: do built environmental and socioeconomic factors contributing to pedestrian and bicycle crash outcomes differ between Ohio and Florida metro areas? In doing so it seeks to firstly determine if different strategies for preventing severe crashes should be pursued in different metro contexts, both in terms of road design and land use planning, as well as prioritization of where to apply interventions. And secondly to consider if, rather than holding up Europe as a model practice, we could instead be promoting learning of best practices from the contexts and experiences of the safer US cities.

For this study, data on crashes as well as road characteristics was accessed from the Ohio and Florida Departments of Transportation, allowing for the inclusion of injurious crashes rather just FARS (Fatality Analysis Reporting System) fatal crashes which are more commonly used for national analyses. Crash and road network data is augmented with land use data from the Open Street Map project, as well as American Community Survey data from the US Census Bureau. Descriptive analysis confirms that the metros in sunbelt Florida have much higher per population injurious and fatal pedestrian and bicycle crash rates. Comparative negative binomial modelling of pedestrian and bicycle crashes in Census block groups shows that a higher proportion of five-plus lane arterial roads are substantially responsible for higher crash rates in Florida. Additionally, gas station convenience stores are more strongly associated with crashes in Florida than in Ohio. Historical context is provided to interpret these findings, showing that for both states, counties that grew more after 1950 have higher crash rates. Furthermore,
modeling shows that race is far more of a factor in increasing serious crashes in Florida metros than in Ohio, while lower income has a stronger effect in Ohio. Segment level case studies further detail these findings and inform conclusions and recommendations.

Citations


Key Words: Pedestrian, Bicycle, Safety, Sprawl

INFLUENCES OF AREA-WIDE AIR QUALITY ON THE ACTIVITY AND TRAVEL BEHAVIOR OF URBAN, SUBURBAN, AND RURAL RESIDENTS OF NORTHERN UTAH

Abstract ID: 606
Individual Paper

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Air pollution has been linked to numerous negative health effects, and the transportation sector is one of the main contributors to air pollution (Anenberg et al., 2019), including fine particulate matter (PM2.5). Under certain geographical, meteorological, and environmental conditions—such as those commonly experienced in high-elevation bowl-shaped mountain valleys in winter—temperature inversions can trap pollutants from transportation and other sources. Such conditions are often present in Cache Valley in Northern Utah, which sometimes experiences the worst air pollution in the entire US (Malek et al., 2006). During such events of high area-wide air pollution, policy-makers encourage residents to modify their travel/activity behavior to reduce driving-related emissions, such as by teleworking, riding public transit, or trip-chaining (UDOT, 2023). While some research has looked at aggregate behavior change in response to air quality alerts (Saberian et al., 2017; Tribby et al., 2013), few studies have looked at individual behavior change.

The objective of this study is to investigate the relationships between air quality and individual-level activity/travel behavior during episodes of area-wide poor air quality, including any differences in response based on residential location and urban form. Specifically, data come from a six-day panel household travel diary survey of more than 300 adult residents of Cache Valley, Utah, conducted in winter 2019. Responses were obtained from people living in urban, suburban, and rural neighborhoods. Multiple regression models relate the air quality index (AQI) to various activity/travel behavior outcomes (activity frequency by type, trip frequency by mode, travel distance, travel time), while controlling for personal and household characteristics (age, gender, race/ethnicity, income, etc.) and the built environment.

Preliminary results suggest no significant relationship between AQI and most measures of activity/travel behavior. Significant associations with activity/travel behavior were found for several personal characteristics (age, gender, income) and measures of the built environment (residential and employment density). Additional analyses will test for significant interactions between AQI and neighborhood type (urban, suburban, rural) and other variables, and
improve the simultaneous estimation of all models. Overall, results from this study will indicate the extent to which activity/travel behavior is (or is not) affected by area-wide air pollution and any differences in urban form, thus helping to inform an understanding of the effectiveness of air quality alerts/awareness and the design of policies to reduce driving-related emissions during episodes of area-wide poor air quality.

Citations


Key Words: Air pollution, Travel behavior, Activity, Urban form

DEVELOPING A MULTI-CRITERIA PRIORITIZATION TOOL TO CATALYZE TOD ON PUBLICLY OWNED LAND AREAS

Abstract ID: 622
Individual Paper

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Public agencies can take a leading role in catalyzing TOD by making land available to developers (selling or leasing land, potentially below market prices). In particular, park and rides that are publicly owned can be leveraged to support TOD uses, such as affordable housing, office space, small businesses, and mixed-use buildings given their convenient access to transit systems and often large land areas. To effectively support TOD planning, this research developed a multi-criteria prioritization tool to identify the most promising locations for TOD and tested it at three park and ride sites owned by the Washington State Department of Transportation. The research sought to answer the three questions: (1) What indicators should be included to measure the suitability of public land for TOD? (2) How do these indicators contribute to TOD suitability in order to develop a prioritization tool? (3) How to extend the application of this tool to catalyze TOD on other publicly owned land areas in different geographic contexts?

The tool was developed through the Delphi process, which is an effective and inexpensive approach to evaluate relevant indicators by synthesizing the opinions of experts from various backgrounds. Five categories with a total of 14 TOD indicators, including transit supportive land-use zoning, job accessibility, land price, land-use mix, and household income, were selected as measures of TOD suitability. The importance of these indicators varied with three different TOD scenarios: (1) emphasis on affordable housing, (2) emphasis on market-rate housing, and (3) emphasis on mixed-use development. Using the calculated suitability scores, this tool can prioritize potential TOD sites for further review.

Citations

Key Words: Transit-oriented Development, Delphi Method, Multi-criteria Planning Tool, Multi-sources Geospatial Data, Publicly Owned Land

UNDERSTANDING PEDESTRIAN TOUR-BASED TRAVEL IN DIFFERENT URBAN FORMS: EVIDENCE FROM SMARTPHONE-BASED DATA
Abstract ID: 623
Individual Paper

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Urban forms and locational attributes can either promote or dissuade walking (Saelens and Handy, 2008). With the prevalence of planning policies and investments intended to increase active transportation, there is a growing need for municipalities to better evaluate walking-promoting interventions through travel demand analysis. Addressing these needs requires a better representation of walking and tour-based travel analysis in forecasting models (Clifton et al., 2016; Krizek, 2003) including more complete disaggregate travel data from individuals. In practice, there are commonly accepted methods to gather data on and develop models for motorized travel, which allows for accepted travel demand assessments of proposed interventions. These same levels of sophistication have not been extended to active transportation. Better representing pedestrian travel in both behavioral travel analysis and the transportation planning process requires enhanced data and methods on active transportation (Harding et al., 2021).

To understand the explanatory power of the locational attributes on the propensity to make pedestrian tour-based travel, this study investigates the effects of urban forms on walking trip-chaining behavior using empirical travel pattern data passively gathered from smartphones in the Region of Waterloo, Canada. By using the binary classification and frequency analysis, pedestrian tours are further defined by a number of attributes including the integration with other modes; the sequence of travel and activities; the number of activities completed during a tour; and the duration of scheduled pedestrian activities. These definitions result in typologies and assessments of the complexity of pedestrian tours. This classification of pedestrian tours advances our understanding of pedestrian travel patterns and the links between these tours and the built environment at a regional level. The methods by which these tours may be embedded in travel forecasting models are explored.

This study further discusses the observations derived from the empirical data from which pedestrian tour typologies are determined and metrics of complexity are introduced. The observations include the pedestrian activity types in different urban forms, distribution of travel duration and distance in urban core areas and suburbs. Generally, the data suggest that people make longer pedestrian tours in the urban core areas. One can posit an explanation that the downtown can be more pedestrian friendly and/or can support more activities to be accomplished because of the higher density and diversity in land uses. Longer pedestrian tours are observed in downtown to accomplish multiple activities. Tours involving driving are longer in time in downtown but shorter in distance, reflecting the traffic in urban areas. In urban core areas, the most often observed activity is work and the most often observed tours are long pedestrian tours with multiple activities accomplished. But in suburban areas, the most often observed activity is shopping, and many observed tours are long auto trips followed by short
pedestrian tours. In general, people who live in residential suburbs make less-frequent, long, and complex auto tours with a high predetermination to travel. People who live and/or work in urban core areas make frequent, short simple tours by active mode with a low predetermination of travel and more impromptu activities.

This assessment of travel tours involving pedestrians provides a better representation of strategic level analysis of walking behavior. The pedestrian tour can reflect the access mode, sequence, frequency, and duration of scheduled pedestrian activities and related trips. These attributes of pedestrian tours can help with improving forecasting models by informing the generalized cost function, the underlying decision framework in models’ predictions of destination, mode and path. Moreover, the pedestrian tour can inform planning interventions for divided places and neighborhoods by understanding the explanatory power of the locational attributes on the propensity to make pedestrian tours.

Citations


Key Words: Walking Behavior, Tour-based Travel, Urban Forms, Smartphone-based Data Collection

CONNECTING STATE K-12 STUDENT TRANSPORTATION POLICIES AND SCHOOL BUS USE
Abstract ID: 625
Individual Paper

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On academic year weekdays in the United States, school buses are the most-used form of public mobility – more students board yellow buses than do all other forms of public transit combined. Policies on which students receive this important service are set at the state level, and this gives the potential for school bus service provision and access to education that buses provide to vary from state to state. Little is known about how these policies affect school bus usage, despite scholars suggesting school bus use may be associated with better student attendance. Further, the landscape of traveling to and from school has changed dramatically over the past century. While early vehicular transportation enabled the unification of small, isolated schoolhouses into unified school districts, more recently, school siting decisions have led to new school construction on the urban periphery where land for athletic fields and parking lots is cheap and available, which in turn has contributed to a dramatic decline in the number of students who walk or bike to school.

Considering these implications, I explore two research questions: What personal, household, and built environment factors predict school bus use? And what aspects of state policies predict this decision?

This paper conducts a two-part analysis school transportation policies and school bus usage at the state level for a ten-state sample: Arizona, California, Georgia, Iowa, Maryland, New York, North Carolina, South Carolina, Texas, and Wisconsin. I select these states because they are the only states with add-on oversamples in the 2017 National Household Travel Survey (NHTS), which allow isolated examinations of state-level travel behaviors and, thus, school bus usage. The Federal Highway Administration conducts the NHTS semi-regularly and asks participating U.S. households from a stratified random sample about their trip-making and activity patterns.
First, I search each state’s statutes and/or education codes for school transportation authorization legislation and evaluate each state’s current on a framework that includes mandates for transportation, funding mechanisms, eligibility requirements, and fee provisions. Second, because the relevancy of these policies lies in their connection to students’ usage of the systems authorized, required, and/or funded, I use a multi-level logistic regression model to predict students’ use of the school bus to and from school, controlling for a variety of student, household, and built environment characteristics, as well as state policy and education characteristics.

Preliminary descriptive findings suggest that state policy does indeed have associations with school bus use. The national average of school bus trips as a percentage of all school trips is 35%. In this sample, the states deviate from that mean somewhat notably, with Arizona as the second-lowest at 27% and Maryland as the highest at 53%. However, it seems that through some combination of mandate and money, states are able to get students onto school buses. Without either of these, however, usage apparently plummets: only 8% of California students ride a yellow bus, yet less than half live within walking distance, and the average student lives 3 miles from school, leaving most California students largely on their own for accessing their education.

School transportation policies are set by state legislatures and are generally administered by state departments of education. However, the effects of these policies have implications for planners and policymakers in transportation planning, as millions of students each day rely on school buses or other means of public space and shared mobility to travel to and from school. Understanding how these policies affect students’ decisions to ride the school bus inform both how that system is used and how other students who do not take the bus might benefit from other planning interventions.

Citations


Key Words: School transportation, Travel mode choice, State policy

BUILDING MOBILITY JUSTICE IN INFORMAL TRANSPORT: A PRACTICAL EXPERIMENT

Abstract ID: 630

Individual Paper

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Informal transport provides the bulk of urban mobility in the Global South, but may be limited in the connectivity and spatial coverage they are able to provide. Matatus, tro-tros, danfos, daladalas and other local mobility solutions are and famous components of African cities, but also face exploitative working conditions, limited financing and disregard and vilification from regulators. These all mean extensive gaps and poor accessibility for urban residents, as well as high costs, exposure to danger, discomfort and indignity. This study shares the results of a pilot test of a new minibus route in Kampala, Uganda, established with the transport workers union of Uganda.
Assessing accessibility in this approach for mapping latent demand, we find that even a limited expansion of routing immediately found passenger demand, particularly for “counter-current” travel against the existing pattern of radial, CBD-to-suburb mobility maintained from the colonial-era public transport network. Female street vendors were an important, previously unserved passengers, as well a spectrum of working and middle class passengers across the city. From the operational side, the study revealed high barriers to establishing new services within the system, with limited financial and managerial resources and multiple vectors of exploitation and extraction embedded in the informal urban economy stymying growth and change. Through the experimental intervention, we can develop an analysis of latent, un-met accessibility and travel needs, including questions of gendered mobility, price, safety and dignity. We develop an avenue of intervention for regulators and planning practitioners for a light-touch, participatory intervention which collaborates with informal transport workers to expand accessibility and equity for passengers.

Citations

- Ference, M., 2021. ‘You will build me’: fiscal disobedience, reciprocity and the dangerous negotiations of redistribution on Nairobi’s matatu. Africa 91, 16–34. https://doi.org/10.1017/S0001972020000820

Key Words: informal transport, labor, participatory planning, experimental interventions, transportation justice

NEW OPEN-SOURCE ANALYSES OF TRANSIT JOB ACCESS AND TRANSIT RIDERSHIP

Abstract ID: 634

Individual Paper

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This research project examines the link between job access and stop/station level transit ridership. Job access, following recent literature, is measured as the number of jobs that can be reached within a 30-minute transit travel time, including transfers and walk time to access jobs once exiting a transit station. Cumulative opportunity job access measures of this sort – i.e. the number of jobs that can be reached within 30 minutes – have become common in the recent access literature, and those measures have often focused on access via transit. Yet there have been few studies that examine the link between transit job access and transit ridership, and of those none that examine the link at a station or stop level. We use station and stop level ridership data for the Los Angeles Metro bus and rail system and the BART rail system in the San Francisco Bay Area. We calculate transit job access as jobs that can be reached within 30 minutes, using the Remix software tool. Regression analysis of 1,000 randomly selected Los Angeles bus stops reveals a robust relationship between stop-level ridership and job access. The association between transit job access and bus stop ridership (embarkations and disembarkations at the stop) is statistically significant. Converting that association into an elasticity, if the number of jobs accessible within 30-minutes were to increase by 1 percent, on average stop-level ridership would increase between 0.6 to 0.8 percent. The same association, with similar magnitudes, exists for Metro rail stations and BART rail stations, but due the smaller sample sizes, those relationships are not statistically significant when control variables are added to the regression. Our findings show that job access is closely related to ridership at the bus stop level, suggesting transit agencies can increase job access by increasing bus frequency, reducing transfers, siting lines that connect job concentrations to residents, and by improving bus stop/rail station access/egress times.
Citations


Key Words: Transit Job Accessibility, Transit Ridership, Bus Stop Ridership

PLANNING FOR INCLUSIVE AND EQUITABLE VEHICLE MILES TRAVELED (VMT) MITIGATION IN CALIFORNIA
Abstract ID: 636
Individual Paper

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California’s Senate Bill 743 replaced the level-of-service (LOS) measure with vehicle-miles traveled (VMT) to better align with the state’s climate goals, but its implementation raises several equity challenges. This study uses a mixed methods approach to gauge how local governments are faring in integrating VMT mitigation strategies in developments within their jurisdictions and identify equity and inclusivity gaps in the transition process. The overarching research question to be addressed by this study is: What factors should be considered for developing and implementing an equitable and inclusive VMT mitigation strategy? We used a linear regression model to analyze the impact of micro-scale built environment features on VMT through the State of Place Index and examined the potential equity implications of improper VMT mitigation. Our study findings highlight the importance of interactions between micro- and macro-scale built environment features, transit access, and income in any VMT mitigation strategy. While on average, macro-scale built environment features had the largest impact on reducing VMT (35%), as compared to transit access (15%), micro-scale features (13%), and income (6%), it is not appropriate to deduce that macro-level built environment features are the most important to address in mitigating VMT, but rather, the combination of all four factors must be considered for effective and equitable VMT mitigation. An analysis of the interview data shows that transportation planners deal with several key challenges: the lack of reliable, standardized VMT estimation and evaluation tools; the challenge of distributing VMT mitigation equitably; and the difficulty of implementing an inclusive community engagement process. To combat equity issues and intervene in underserved areas, experts stressed the importance of properly identifying vulnerable populations and communities of concern and engaging with the community when determining what VMT mitigation strategies to implement, as well as developing VMT estimation tools that consider contextual variables. Overall, our findings support a nuanced, multi-factor understanding of the context in which new developments are being proposed when implementing VMT mitigation measures.

Citations

Public opinions on major public transit projects significantly influence their design and implementation (Wijaya et al., 2017, Calvo-Poyo et al., 2019, Ignaccolo et al., 2019). This study aims to answer the following research questions: (1) How do perceptions toward a new BRT line change between before and after its opening? (2) What are the differences in perception between those living close to the infrastructure compared to those who do not? (3) How can these finding help inform policies aiming to increase project acceptability? Our study concentrates on the Pie-IX BRT line in Montréal, Canada. A $426M Cad system with 20 stops along a 13 km stretch that opened in November 2022 in the East side of the Montréal Island serving a low-income community. Drawing from two waves of the Montréal Mobility Survey, we analyse open-ended questions regarding the perceived (present and future) impacts of the BRT system (2021, n = 200; 2022, n = 251). For each wave, we conduct a qualitative thematic analysis, and compare the results between the two waves temporally and spatially. Respondents and themes are classified based on living within 1 kilometer from the BRT stations (or not) and the time the opinion was collected (before or after the opening). In the buffer, themes raising issues regarding urban design and traffic conditions and quality of service increased overtime as the project progressed. While perceptions on the overall value of the project decreased among those in the vicinity of the BRT over time. Those in the buffer became more concerned overtime with their local conditions, such as cuts in service from pre-existing lines, dissatisfaction with the BRT operation, road safety, and worsened traffic conditions for drivers. At the city-level (outside the 1 km buffer), themes were mostly stable overtime and focused on evaluating the project and its regional impacts. The most prevalent themes were the inadequacy and inefficiency of the project, discontentment with BRT being chosen as the solution for the corridor, and complexity and timeline of construction. Our analysis shows that to increase acceptability of the BRT different policy directions are needed for those within and outside the buffer. Those living within the vicinity of the BRT became increasingly more concerned with service improvements and changes in street design. For those living outside the buffer, public perception tends to focus on efficiency of project delivery and rationale of implementation, with little change before and after the opening of the project. This highlights the need for better communications of the justifications for using certain technologies when it comes to such large-scale projects as well as better communications of the challenges that a project faces overtime. The findings from
this research can be of benefit to practitioners and policy makers, as they shed light on the evolution of perceptions towards new transit infrastructure overtime and geographically, thus aiding in better addressing public needs and concerns.

Citations


Key Words: public opinion, public acceptability, public transit, BRT, thematic analysis

THE INFLUENCE OF SMART LOADING ZONES ON TRAFFIC
Abstract ID: 644
Individual Paper

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Curbside space becomes increasingly valuable in urban areas due to the rise of ride sharing services and growing demand of online purchase deliveries. Insufficient management of curb space may result in adverse transportation externalities such as traffic congestion and heightened environmental emissions from increased cruising times and distances traveled (Jaller et al., 2021; Machado-León et al., 2023). Cities have invested much effort in managing curbside space, one of which is the deployment of Smart Loading Zones (SLZ). SLZ is a designated curb space that is equipped with technology and sensors to enable efficient and optimized use of the space by delivery vehicles and trucks. While the goal of SLZs is to reduce congestion, its impact on traffic is still unclear. On one hand, SLZ could help increase the utilization of the curbside space and reduce cruising and related congestion. On the other hand, the increased curbside usage brings more frequent parking and unparking maneuvers, which could induce traffic delay on the streets (Biswas et al., 2017).

With the data from Pittsburgh, PA, this study examines the impact of SLZs on traffic speed in the downtown area with the regression discontinuity design approach (Imbens & Lemieux, 2008). Specifically, we compare the traffic speed during a short period (i.e., one to two weeks) right before and after the installment of SLZs while controlling for multiple factors, including road characteristics, weather, transit trips, on-street parking activities, time, and location. During these several weeks, other factors such as people’s travel behavior, transportation policies, and other regulations can be assumed constant and will not influence the estimation. The results show that the SLZs have a significant and positive effect on its nearby traffic speed in the downtown area of Pittsburgh. In addition, this positive effect is various across time of the day, only significant during early morning hours (6 and 7 am) and evening peak hour (4 pm) of the day. We also carry out several tests on the robustness of these results.

The findings validate the significant contribution of SLZs in alleviating traffic congestion in downtown road sections in the city of Pittsburgh. Nevertheless, the varying impact throughout the day indicates that SLZs are only efficacious during certain hours. This research offers empirical evidence for implementing SLZs to manage high-traffic curbside areas in the city center, while also highlighting areas for potential enhancement, such as the need for improved enforcement regulations and ticketing systems.

Citations
EXPLORING PEOPLE’S INTENTION TO USE AUTOMATED SHUTTLES: EMPIRICAL EVIDENCE FROM AN AMERICAN SUBURBAN NEIGHBORHOOD

Abstract ID: 659
Individual Paper

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Along with the autonomous vehicle (AV) technology breakthrough, over a dozen American cities have launched pilot programs deploying small (may hold up to 15 passengers), electric, low-speed (cruising around 12 mph), and fixed-route automated shuttles (AS) in recent years (Haque & Brakewood, 2020). As the potential for integrating self-driving solutions into public transportation emerges, exploring factors influencing people’s intention to use those AS pilots has become paramount. Also, analyzing their opinions and expectations can help promote acceptance and address possible resistance arising during the early testing stage rather than after the mass implementation of AS/AVs.

However, a literature review has revealed the following gaps. First, previous survey-based studies on this topic were primarily speculative. Almost all respondents had no physical ridership experiences and needed to imagine AV/AS concepts and scenarios to give feedback (Nordhoff et al., 2018). Secondly, even for studies that used data collected from people with actual experiences, they targeted lately deployed AS pilots, where the participants only rode once for a short period and could not reflect accurate, stable usage attitudes (Nordhoff et al., 2021). Third, little research focused on public AS instead of private AV, which had distinct consumers, purposes, and social values. Fourth, most AS literature investigated programs in denser, mixed-use urban areas within Europe and Asia. These could not represent different research contexts, especially numerous suburban settlements across the United States with unique land use and traffic compositions.

To address these gaps, we employed an empirical study utilizing an extended technology acceptance model (E-TAM) to explore people’s willingness to ride in an AS, incorporating six factors: perceived ease of use, perceived usefulness, trust in AS safety, perceived AS reliability in inclement weather, personal innovativeness, and environmental awareness. To test the model, we applied questionnaire survey data gathered onsite from 223 participants living or working in a car-oriented residential suburb, Lake Nona, Orlando, FL. They have ridden in or closely observed a local AS program called Move Nona for years, the largest AS pilot (free of charge and fixed route) in the United States, operating since 2019. The Lake Lona case can epitomize analogous communities searching for innovative AS-based public transit options.

The structural equation analysis indicated that perceived usefulness ($\beta = 0.961, t = 7.389, p < 0.001$) was the most critical factor impacting people’s intention to use Move Nona. It is well-established that users prefer a faster and
more convenient transit mode to save time and effort if excluding additional variables like price and accessibility (Li et al., 2010). Meanwhile, perceived ease of use and environmental awareness also had significant impacts. In contrast, factors related to trust and personal innovativeness were insignificant, suggesting that when users were no longer curious about a driverless system as a passenger, they would instead refocus on some fundamental aspects of the transit service, like travel speed and convenience. The questionnaire further asked the survey participants their expectations of facilities or features added to the Move Nona system that would encourage ridership. One hundred twenty-eight respondents gave 1,101 recommendations. The top three were increasing the AS speed to 30 mph (76.7%), developing a smartphone app with real-time map and schedule (74%), and having a hail-and-ride option (59.2%).

Overall, the present findings offer valuable insight into designing and promoting AS systems, facilitating car-dependency reduction, and promoting equitable community mobility.

Citations


Key Words: Automated shuttles, Autonomous vehicle acceptance, Smart mobility, Technology Acceptance Model (TAM), Lake Nona

PLANNING SUSTAINABLE CITIES: COORDINATING ACCESSIBILITY IMPROVEMENTS WITH HOUSING POLICIES

Abstract ID: 675

Individual Paper

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Emerging mobilities like automated vehicles, mobility-on-demand, and micromobility are motivating discussions on the future of cities. Domain experts agree that there is great uncertainty about their net effects on cities. While short-term travel time and cost savings are possible, the induced travel demand will likely cancel out those benefits in the long-term. There is less uncertainty and more agreement about accessibility benefits, which can increase worker welfare but might also result in larger travel distances and urban sprawl. Several megacities are actively planning ‘car-lite’ strategies to reduce private car ownership and use with the help of these emerging mobilities (and supporting transportation and land use policies). Car-lite policies are likely to be first piloted at a neighborhood scale instead of the entire city because it stands to reason that planning agencies will test out the policy in a limited capacity first before rolling it out to their entire jurisdiction. How will such pilots impact neighborhoods? Will they be successful in reducing vehicle ownership and use? To what extent will they induce undesirable but consequential side-effects such as gentrification?

This study attempts to address these questions using SimMobility - a state-of-the-art agent-based land-use
transportation interaction (LUTI) microsimulation model. We use the Long-Term (LT) component that involves the creation of a synthetic population, followed by household-level residential location and mobility holdings choices, and individual-level job location choices, at the temporal scale of days to years. This study uses the SimMobility calibration for the city-state of Singapore, which makes for a particularly interesting study area for testing housing and mobility policies owing to the tightly regulated markets. We construct car-lite policies that improve accessibility locally in selected neighborhoods as a representation of the localized impacts of emerging mobilities. Various scenarios are designed based on hypotheses about market responses to car-lite policies – (a) baseline (no reaction), (b) minimal effect (awareness only), (c) increase in buyer valuations, and (d) increase in both buyer and seller valuations.

A couple of years ago, we reported that the increased accessibility from the car-lite pilot did make most neighborhoods significantly more vehicle-free. However, the in-mover households were found to be comparatively higher-income than both the households they displaced as well as the original study area population. The vision of a car-lite community is adversely impacted in such circumstances where higher-income households, who are more likely to have private mobility holdings, refuse to reduce their mobility holdings after outbidding lower-income households for housing in the study area. Thus, the gentrification side-effect significantly reduces the potential vehicle-free gains from the car-lite policy. In certain neighborhoods, as much as 90% of the expected reduction in vehicle ownership can be offset by the housing market-driven effect. These neighborhoods turn out to be only marginally more vehicle-free than they were initially without the car-lite pilot.

This year, we shortlist four neighborhoods based on how the accessibility improvements affected them, and test whether and how integrated housing policies (such as new public housing and car-restricted housing) can mitigate the gentrification side-effects while maximizing car-free gains. We examine various offerings of new public housing, both at market-rate and mixed-rate (some market-rate and some affordable), with several mixes of different unit sizes. We also examine car-restricted housing supply, both with and without discounts to offset the inconvenience of the vehicle ownership restriction. Our results suggest that both policies can be successful in achieving the intended objectives. Additionally, they distribute accessibility benefits among a wider range of households, while increasing consumer surplus for all neighborhood residents. By making these neighborhoods differentially attractive to lower-income vehicle-free households, car-lite gains can be significantly increased.

Citations


Key Words: Accessibility, Vehicle ownership, Housing, Land use-transport interactions, Agent-based microsimulation
Electric buses (E-buses) are increasingly adopted across the United States. For a transit agency, the bus electrification process involves two major considerations: route prioritization and planning of electric bus charging stations (EBCS). However, there has not been an established methodological framework to guide transit agencies on these topics. Despite a growing number of studies on bus fleet electrification, little research has focused on route prioritization. Also, previous studies have commonly tackled the problem of planning for EBCS by assuming a fully electrified bus fleet [1-3]. In reality, the transition to electric bus fleet is a gradual process, that is, one or several e-buses are added at a time (to either replacing diesel buses or expanding the fleet) [4]. This means that the practicability of utilizing existing work to inform the planning of EBCS and the bus fleet electrification process is constrained.

To address these research gaps, this paper presents an analytical framework for bus fleet electrification and e-bus charging station planning, using the City of Gainesville (Florida) Regional Transit System (RTS) as a case study. It consists of three steps:

1. Estimate bus energy consumption for each route. Specifically, we built an energy consumption estimation model that considers the real-world bus operational characteristics using the General Transit Feed Specification Real Time (GTFS-RT) data. We then compared the estimated daily energy consumption of each bus operating on different routes against the e-bus battery capacity (150 kwh) and grouped the bus routes into two groups. For the first group, the estimated daily energy consumption is below the e-bus battery capacity, implying that e-buses running on these routes can operate without daytime charging. Three of the 42 Gainesville RTS routes belong to this group, which can be prioritized for electrification. For the second group of routes, if e-buses are used, they would need to be recharged to complete the daily operational tasks. Hence, EBCS should be planned to satisfy the charging demand of e-buses on these routes.

2. Estimate charging demand at candidate EBCS. E-buses should be recharged during their service gap time to maximize operational efficiency. Hence, we assume that the EBCS will be placed at (or near) the start & end stops of RTS bus routes. Moreover, since it takes 15-20 minutes to fast charge a bus, we assume that a minimum of 30 min service gap time is required for completing a full cycling cycle. Based on these assumptions and results from Step 1, we identify candidate EBCS sites as areas surrounding start and end stops where more than 10 buses would need to be charged during daytime.

3. Optimize the placement of EBCS. To identify the optimal location of EBCS, we applied two classic facility location models - weighted k-means clustering and maximal location coverage model (MCLP) [5]. The MCLP generated better results, which suggested that placing EBCS at four strategic locations can satisfy more than 90% charging demand of e-buses on the 39 routes where daytime charging is required.

Since the datasets and modeling approaches used here are generalizable, the proposed analytical framework can be readily transferable to other study areas to inform bus system electrification. Future work may further improve our methodology by further accounting for the size and capacity of each EBCS when deciding their locations and by considering optimizing the e-bus charging schedule to maximize the efficiency of EBCS.

Citations
• de Briñas Gorosabel, Oier Lopez, Maria Xyla, and Semida Silveira. A framework for the assessment of electric bus charging station construction: A case study for Stockholm's inner city. Sustainable Cities and Society 78: 103610, 2022

Key Words: Electric buses, Charging infrastructure siting, Electrification, Energy consumption estimation, Framework

DOES MOVING TO A COMPACT WALKABLE NEIGHBORHOOD LEAD TO CHANGES IN TRAVEL ATTITUDES? A STUDY OF MUELLER COMMUNITY IN AUSTIN, TEXAS

Abstract ID: 696
Individual Paper

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A large number of studies show that people tend to choose residential locations based on their travel attitudes, preferences, and needs [1]. However, it is also possible that one’s experience living in a specific built environment context and engaging in context-specific travel behaviors may affect their travel attitudes and lifestyle [2-3]. Used as an object of analysis, residential relocations provide a unique opportunity for researchers to understand how individuals travel behaviors and attitudes change when the built environment changes with a move. In this study, we use a retrospective survey to observe how moving to a transit-oriented new-urbanist community affects the travel behaviors and travel attitudes of its residents. We explore the causal mechanisms underlying observed changes and the patterns of variation across different socio-economic groups.

We focus on residents of the Mueller Community in Austin, Texas, a neighborhood embodying many features of New Urbanist design principles, including high residential density and a diverse mix of single- to multi-family housing units, commercial areas, employment, health, and retail services. Homes in Mueller are distinguished from most other Austin neighborhoods by their smaller lot sizes, minimal yards, and street-facing front porches—features intended to foster community cohesion and social interaction.

We surveyed Mueller residents between April-May 2022 to identify recent movers to the neighborhood and to ask, retrospectively, how moving to Mueller affected their travel behavior and travel attitudes. We recruited residents to complete our online survey questionnaire in Qualtrics, posting invitations in the Mueller community weekly newsletter. We also coordinated with the Mueller Neighborhood Association and property managers of eight Mueller apartment complexes to email survey invitations by email. In later stages, we published the survey invitation to Mueller affinity groups through two social media platforms: Facebook and Nextdoor. Our final sample includes 340 respondents who completed the full survey.

We find that Mueller residents own fewer cars than most Austin residents. By comparing their pre- and post-move conditions, we see that movers to Mueller report reduced levels of car ownership, decreases in driving, and
increases in walking, biking and public transit use after moving to Mueller from their previous location. However, considerable heterogeneity exists in the travel behavior changes among respondents. Older respondents are more likely to increase active transportation use than their younger counterparts.

Importantly, we find that respondents reported more favorable attitudes towards walking and biking after moving to Mueller compared to their previous location. Different components explain this shift: positive shift due to new environment and positive shift due to new behavior. Results from Structural equation modelling show that respondents who increased walking, biking and public transit use while living in Mueller reported a positive shift in attitude towards these modes after relocation. In other words, the new environment influences attitude changes indirectly through changed travel behavior. However, the built environment changes also directly impact attitude, above and beyond the impacts through travel behavior; this result suggests the role of cognition, observation, and social influence in travel attitude. We find that a higher level of social interaction at Mueller (observing other people using these modes and interaction with friends and family) explains the increased use of alternative modes and positive shift of attitudes towards these modes.

In sum, this study shows that building compact walkable mixed-use neighborhoods can help not only to reduce driving but also to incline people’s attitudes more favorably towards sustainable travel options. These results illuminate the long-term, durable impacts of land use-transportation policies on individual’s travel attitudes, residential preference, and lifestyle.

Citations


Key Words: built environment, walkable neighborhood, travel attitudes, travel behavior

A NEW NORMAL OR SAME OLD? EXPLORING THE CHANGING NATURE OF WORK AND COMMUTE IN THE POST-PANDEMIC ERA

Abstract ID: 699

Individual Paper

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Behavioral theories suggest that the interactions of subjective factors (people’s needs, attitudes, beliefs, and values) and exogenous/external factors (situational constraints and favorable/unfavorable conditions) combine to determine behavior. Changes in external factors, including exogenous shocks, can prompt temporary or long-lasting behavioral changes. People may stick to the new behavior prompted by some event (e.g., an earthquake, a pandemic) even after the initial shock has receded, particularly if the change occasions positive outcomes (e.g., more efficient time management, better work-life balance) associated with the new behavior (e.g., remote work, staggered work schedule) (Rahman & Sciara, 2022).

The COVID-19 pandemic was an extraordinary global shock that affected every aspect of people’s lives, including work, and work-related travel. Teleworking increased substantially during the pandemic with more flexible work arrangements. In addition to the where of the work (at the office or at home), the when of the work (when at the office and when at home) also changed. Research based on traffic flow data from freeway performance measurement systems suggests that morning rush hour changed during the pandemic with the spreading of the
morning peak. In some U.S. cities, a late morning peak (around 11:00 am) emerged during the pandemic. Scholars have suggested that this change in peak is likely caused by shifting commutes and the greater flexibility in when workers have to be present at workplaces. Those who worked in a hybrid manner during the pandemic may have commuted during traditional off-peak hours on the days they went to work (Bhagat-Conway & Zhang, 2022; Kahn, 2022). Scholars anticipate this trend to continue coming out of the pandemic; an increased proportion of the workforce may be starting their work day at home and heading to the office later in the day compared to the pre-pandemic era (Shaver, 2022) because of the various benefits flexible work arrangements offer, including but not limited to less time spent in rush hour, better coordination of work and non-work activities, and so on (He, 2013).

However, these anticipations about changes in commute trips and their stickiness are based on macroscopic data and do not reveal whether workers with flexible work schedules actually commute during off-peak hours, or whether the observed traffic changes are due to other factors. To close these gaps in the literature, I ask: Have the peak AM commute departure times shifted during the pandemic, and do these changes appear to be fleeting or enduring? What factors explain these changes?

I draw on the Census Bureau’s American Community Survey Public Use Microdata Sample for 2019, 2020, and 2021 to examine these questions for the US. I model the likelihood of departure times for work in the late morning (9 AM-noon) and early afternoon (noon-4 PM) relative to the traditional morning peak (6 AM-9 AM) for 2019, 2020, and 2021 as a function of socio-demographic characteristics, household characteristics, commute and work-related characteristics, and vehicle access of workers and locational characteristics of their workplace and residences using multinomial logistic regression.

My preliminary analyses suggest that people who are in occupations that offer the opportunity for hybrid work or flexible work schedules (technology, management, and business occupations) are more likely to commute to work later in the day coming out of the pandemic compared to before. Morning peak hours have become more variable and protracted in metropolitan areas that have concentrations of these industries.

This research will contribute to scholarship on the stickiness/non-stickiness of behavioral change through the lens of travel behavior. The findings of this study will offer insight into how to prioritize transportation infrastructure and service provision in the months and years ahead.

Citations


Key Words: Commute, COVID-19 pandemic, Travel behavior, Telecommuting, Peak period travel

WHO IS GETTING OFF THE BUS? A PANEL STUDY OF CHANGES IN COMMUTING BEHAVIOR BETWEEN 2019 AND 2022 IN MONTREAL CANADA
Abstract ID: 718
The COVID-19 pandemic led to a substantial increase in the number of people working from home (telecommuting), in turn leading to unprecedented changes in mobility patterns worldwide, which has not been uniformly distributed across transport modes. Public transit has suffered from a steep declines in ridership at the early stages of the pandemic (Tirachini & Cats, 2020) and still suffering till today. Meanwhile, the use of private vehicles for various purposes has nearly recovered compared to pre-pandemic levels (Melo, 2022). Studies during the COVID-19 pandemic have associated higher telework frequency with a potential increase in car use once the pandemic is over (Javadinasr et al., 2022). Thus, given that the pandemic context may have changed the relationship between teleworking and mode choice, analyses of this relationship need to be revisited. The main goal of this work is to analyze the change in commute behavior between 2019 (pre pandemic) and 2022 (recovery phase from the pandemic) to better understand which groups of commuters are changing their modes and how this is related to newly adopted telecommuting.

This study uses a panel design approach by analyzing travel and telecommuting behavior data from a two-wave survey administered to the same participants in Montreal, Canada (n = 488). The first wave was applied in 2019, pre-pandemic, while the second was applied in 2022, the recovery phase from the pandemic with no restrictions in travel. The two waves of the survey included the same questions pertaining to travel behavior information such as frequency of travel, telecommuting, and mode choices. Respondents’ sociodemographic and economic characteristics, as well as residential choice factors, which allow us to control for residential self-selection, were collected in both waves. Since this study focuses on commuting patterns, we analyze only respondents who were working in both waves of the survey (n = 331).

Through a descriptive analysis of our dataset, we find that 58% of respondents maintained their same commuting behavior in 2022 with respect to 2019. From the 42% of the respondents who switched their commuting behavior to a different transport mode or to telework, a majority were previously transit users; 24% of the original sample. This suggests that car and active commuters are more likely to maintain their pre-pandemic commuting behavior. Regarding the mode switching for 2019 public transit users (24% of the original sample) we find that 30% switched to car, 24% switched to an active mode, and 46% switched fully to telecommuting.

Through a set of weighted multi-level logistic regressions, we study the factors influencing the probability of a pre-pandemic transit commuter to switch to other modes or to telecommuting. Our results show that both transit-based regional accessibility and local accessibility reduce the likelihood that a person switched from transit. We also find that, even when controlling for residential self-selection, key sociodemographic characteristics, such as household income, are relevant in predicting switching from transit. This research provides insights into the effects of telecommuting as a substitute for transit use, as well as on the effect of the pandemic on mode switching from transit. These results are currently of interest to policymakers and practitioners working towards maintaining the sustainability of public transport provision in the post-pandemic context.

Citations


Key Words: telecommuting, commuting patterns, public transport, panel analysis, COVID-19

ASSESSING USERS’ PERCEPTIONS OF SERVICES BY THE TRANSPORTATION NETWORK COMPANY (TNC) USING TWEETS
Abstract ID: 739
Individual Paper

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The transportation network company (TNC), commonly known as ride-sourcing or ride-hailing, has experienced exponential growth during the last decade. It is becoming increasingly important to assess customer satisfaction regarding this emerging mode of transportation for its service planning, assessment, and implementation. Evaluating customer satisfaction can help TNCs identify and address any concerns that customers may have to improve their services. For urban planners and researchers, gaining a better understanding of TNC users’ perceptions and preferences can assist in the allocation of travel resources. This paper seeks to better capture and assess customers’ perception of TNC service using an innovative data source.

Traditionally, transit agencies and planners have relied on surveys and in-person interviews to collect customer feedback and evaluate service quality. However, these approaches are often labor-intensive, error-prone, not cost-effective, and can introduce biases due to memory loss when asking retrospective questions. Moreover, these methods do not capture real-time feedback, which can limit their usefulness in improving customer satisfaction. The rapid development of information and communications technology (ICT) and other innovative techniques have revolutionized our communication patterns and opened up new avenues for collecting customer feedback more efficiently and effectively. Social media data can be a valuable source for collecting customer feedback on TNC services and understanding their satisfaction level, providing an alternative to traditional methods. Because TNC customers and social media users often belong to the same demographic group, who are more likely to be younger, wealthier (with higher incomes), more educated (with higher levels of education), and more digitally savvy. As such, leveraging social media data can help TNCs and transportation planners gain valuable insights into the opinions and preferences of customers, enabling them to improve TNC services and enhance overall customer satisfaction.

This paper particularly seeks to ask the following research questions: Do ride-hailing service users express positive or negative comments toward TNCs via Twitter? What are the most discussed semantic topics among ride-hailing services on Twitter, and what are the major concerns or interests expressed by users in relation to these topics?

To answer these questions, 348,166 tweets posted between December 1, 2014, to Dec 31, 2019, were retrieved through the official Twitter API using the “academictwit” package in the R environment. We excluded retweets and only collected tweets that were sent within the United States, time-stamped, and containing any of the following keywords or hashtags: "uber", "#uber", "lyft", "#lyft", "ridewithvia", "#rideshare", "ride-share", "rideshare", "ridesharing", "#ridehailling", "ridehailling", "ride hailing". A well-known rule-based model called Valence Aware Dictionary for Sentiment Reasoning (VADER) was applied to estimate the sentiment compound scores of each tweet. To investigate potential topics that interest or concern TNC services, three topic modeling techniques will be examined: standard Latent Dirichlet Allocation (LDA), LDA from the Mallet package, and BERTopic. From a methodological perspective, the effectiveness of three topic modeling techniques will also be examined and compared.
Previous research has shown that social media users are more likely to express negative sentiment than positive sentiment, so we expect to obtain more negative tweets than positive ones in our analysis. Through topic modeling of the tweets, we hope to gain insights into the specific concerns and issues that TNC customers have, and identify opportunities for service improvement and policy development. This study represents one of the first efforts to investigate TNC satisfaction using big data, making a significant contribution to the empirical literature on this topic. Its aim is to provide guidance for future research, ultimately enhancing the customer experience.

Citations


Key Words: Urban big data, Transportation Network Company, User satisfaction, Topic modelling, Sentiment analysis

AGE-FRIENDLY PUBLIC TRANSPORT: EVIDENCE FROM TRAVEL BEHAVIOURS OF OLDER ADULTS IN HONG KONG'S METRO STATIONS
Abstract ID: 742
Individual Paper

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As economies worldwide experience significant growth in ageing populations, the need for age-friendly public transport systems becomes increasingly pressing. These systems are essential for enabling older adults to participate in opportunities, promoting transport equity, and ensuring their physical and social well-being in later life. While previous studies have examined the impact of the built environment on human travel behavior, there remains a theoretical gap in our understanding of how indoor environments, such as metro stations, affect older adults’ travel behavior. This study addresses research gaps by examining the in-station travel time, identifying spatial and temporal differences between older (aged 65+) and younger travelers (aged 18-65). By understanding whether and to what extent their behavior differs from that of younger metro travelers, this study seeks to identify the built environment and trip features that contribute to these differences, shedding light on the needs and difficulties encountered by older adults when traveling by metro.

This study investigates the travel time differences between older and younger metro travelers in Hong Kong using five typical weekday smart card datasets in 2020. Two modeling methods are employed and compared: the traditional linear regression model - Lasso regression, and the machine learning method - Random Forest. The study examines the travel time differences between frequent and non-frequent younger and older metro travelers in three time dimensions: AM peak, PM peak, and non-peak hours. During both AM and PM peak hours, older adults tend to experience longer travel times compared to younger adults. Moreover, among older travelers, frequent travelers have smaller travel time differences compared to non-frequent travelers when compared to younger travelers. Results show that Random Forest models perform better than Lasso regression in exploring the
non-linear and threshold effects of trip and built environment features on travel time differences. The study identifies the crowdedness level, number of staircases, exits, and escalators as features that have significant non-linear effects on travel time differences between older and younger metro travelers. The findings of this study can help improve the understanding of older adults, identify stations that present challenges for older adults and provide policy guidance aimed at reducing travel time differences and promoting transport equity for older adults.

Citations


Key Words: Travel time, Older adults, Built environment, Metro station, Age-friendly public transport

THE IMPACT OF URBAN FORM ON COMMUTING MODE SHARES: A COMPARISON OF RAIL VERSUS BRT STATION AREAS IN THE US
Abstract ID: 766
Individual Paper

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While the relationship between the built environment and work commuting has been studied in rail station areas, there are no studies focusing on bus-rapid-transit BRT station catchment areas. It is important to separately investigate the built environment effects on travel behavior in different types of stations to adjust transportation planning policies accordingly. This approach would help better control for the heterogeneity effect across rail- vs. BRT-based stations as well as provide insights to policymakers while planning and designing new station areas.

Overall, this study is trying to answer the following questions: (i) How is commuting mode shared around public transit stations associated with urban built environment at neighborhoods and metropolitan scales? (ii) How do the associations change around different types of public transit systems (Rail vs BRT)?

To answer research questions, more than 2790 fixed guideway transit stations (light, heavy, and BRT) have been considered across the US, in 33 metropolitan areas, to investigate the impact of urban form on commuting mode shares. Urban form features are measured at two levels: the public transit catchment area and at the level of the metropolitan statistical areas (MSAs). Because the data structure is hierarchical (public transit catchment is nested within metropolitan areas (MSAs)), a two-level hierarchical linear (HLM) model has been used to correct for within-metropolitan areas correlation among neighborhoods.
Overall, the results reveal that while there are some similarities with respect to determinants of commuting mode shared around rail and BRT stations, the results point to important differences in the role that spatial scale, socioeconomic factors, and land use factors have on commuting modes shares in rail versus BRT station areas. First, the set of socio-economic factors associated with active modes of travel around stations may suggest that a more walkable environment around BRT stations encourages a greater number of just white people to walk/cycle for commuting (there is a significant and positive association between the rate of white people and walking/cycling around BRT stations, but there is no such effect around rail stations). Second, although a greater rate of educated people is associated with a higher rate of taking public transit around rail stations, around BRT stations there is a negative association between the share of highly educated residents and using public transit. Furthermore, the results reveal that more compact urban forms are associated with more sustainable modes of commuting at the neighborhood level for both types of stations, but compact urban forms tend to have a larger impact on commuting mode shares around BRT stations (according to the average elasticity). Another point is that by comparing the results of rail, and BRT stations, it may suggest that the link between built environment and commuting mode shares is not always linear, since for some variables the sign changed from all types of stations (rail and BRT together) to rail and BRT stations. Finally, the results reveal that the built environment tends to have a larger impact on commuting mode shares around BRT stations than rail stations, by comparing the average elasticity of the built environment.

Accordingly, it would be suggested that urban and transportation planners take into consideration the type of stations (i.e., whether it is developed around a rail or a BRT station) and adjust their policy and design guidelines, behavioral expectations, and travel demand management strategies when planning for such projects.

Citations


Key Words: commuting mode share, Two-level urban built environment, Bus Rapid Transit (BRT) stations, Rail stations, Hierarchical linear (HLM) model

**IMPACT OF APP-BASED MOBILITY SERVICES BEYOND THE MOBILITY PERSPECTIVE: INFLUENCE ON 'DESTINATION CHOICE'**

Abstract ID: 777

Individual Paper

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The supply of the transportation system has changed in the last few years through advancements in app-based technology leading to growth in shared mobility and micro-mobility services, disrupting traditional ways of travel. Research has examined the impact of these modes from a mobility perspective, examining the shift in travel mode, induced trips, and travel distance (Dong et al., 2021; Fukushige et al., 2022). But little is known if and how this new supply of transportation affects people’s choice of destination location. Since the purpose of transportation is to reach destinations rather than just mobility, understanding the impact of new transportation modes should
include analyzing both, mobility-related metrics of distance, frequency, etc. as well as the choice of destination location in terms of its density, land use mix, and other urban form characteristics. Understanding the relationship between shared and micro-mobility modes on the choice of destination location will help to evaluate the impact of these modes on improving accessibility. This is particularly important since travel mode and destination choice decisions are frequently made simultaneously for non-work recreational purposes (Ding et al., 2014), and shared and micro-mobility modes are used more for non-work travel.

Taking a longitudinal approach, the study will use the Structural Equation Modeling (SEM) technique to understand the causal relationship between travel mode and destination choice, comparing the impact of shared or micro-mobility services and travel modes before the app-based mobility era. The analysis uses Chicago Metropolitan Agency for Planning Household Travel Survey data from the years 2008 and 2018, representing observations before and after large-scale deployment of app-based shared and micro-mobility, respectively.

We hypothesize that as compared to the pre-app-based mobility era, shared mobility and micro-mobility services users are changing the location of destination choice. It is likely because users can travel farther destinations due to reduced overall travel costs for accessibility benefits. Also, they can travel to more dense urban locations because of reduced parking costs and stress for accessibility gain. But it is also possible that people may shift only mode choice to shared or micro-mobility service and destination choice remains the same. They may be habituated to a destination or have self-selected themselves in an area with destinations in proximity and change only travel mode (van Wee, 2011). Hence, the potential impact that app-based mobility services can have on destination choice may be reduced, especially as a lot of shared or micro-mobility services live in high-density, mixed-use areas with proximal destinations (McKane & Hess, 2022).

Until transportation planners and policymakers understand how these new travel modes impact the choice of a destination location, their plan and funding policies to grow app-based mobility services will focus on mobility-related benefits and not on how it makes destinations accessible. Understanding the causal relation between app-based mobility modes and choice of destination location will also help to understand the change in the economic desirability of new destination areas and its influence on urban sprawl. These have direct planning implications, such as planning for the parking of docked micro-mobility vehicles, drop-off/pick-up space for ride-hailing services, planning transit access to these new areas, and managing regional growth. Particularly, as shared mobility services together with autonomous vehicles are considered to be the future of transportation, the study can give insight into the future potential of shared autonomous vehicles in regional growth.

Citations


Key Words: Destination Choice, Micromobility, Structural Equation Modeling, Shared mobility
EHIGHWAY IN GERMANY: TESTING THE FEASIBILITY OF CHARGING TRUCKS OVERHEAD WHILE DRIVING

Abstract ID: 789
Individual Paper

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The eHighway system is one solution for a significant reduction of greenhouse gas emissions in freight transport. The eHighway system enables so-called overhead contact line trucks (O-trucks) to drive while charging electric power. In this paper, we summarize key findings on the feasibility and scalability of the pilot project ELISA, which is the longest O-truck track in the world. We ask whether the novel technology of the eHighway system is feasible based on:

- Its technical requirements?
- Its acceptance by transport companies?
- And its infrastructural robustness in delivering the energy the O-trucks need to charge?

Drawing on data and insights from more than three years of field test operation on public roads in Germany, we analyze Big Data related to operations of the O-trucks that were collected on-board, weekly interviews with drivers and surveys from management over three years, and research from industry on the energy demand of the infrastructure.

In this paper, we present findings on greenhouse gas emission savings, inform politicians on the technical and operational integration potential of O-trucks by transport companies, and evaluate resilience, availability and efficiency of the overhead contact line system. In summary we find that

The eHighway System enables 100% electric operation of heavy trucks if transport companies have access to an adequately developed overhead contact line infrastructure.
The overhead contact line infrastructure is a fully developed, mature system with confirmed stable and reliable operation.
The future viability of the eHighway system for transport companies is dependent on the spatial availability of an overhead line infrastructure network.
The expansion of overhead contact infrastructures requires the involvement of the public. With our paper we provide evidence of the feasibility of an O-truck system, we contribute to the ongoing discussion about the strengths and weaknesses of different technologies to reduce greenhouse gas emissions.

Citations

EVALUATING EQUITY IN TRANSPORTATION INFRASTRUCTURE: A COMPARATIVE SPATIAL ANALYSIS OF JOB ACCESSIBILITY IN DALLAS-FORT WORTH AND HOUSTON-GALVESTON METROPOLITAN AREAS

Abstract ID: 814
Individual Paper

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In recent decades, mobility-based transportation planning has prevailed and affected several land development practices across most US cities. Higher mobilities in a region implies longer distances between origins and destinations, which results in lower densities, non-contiguous and highly automobile dependent land use development pattern (Cervero, 2009; Levine et al., 2019; Levinson, 2010; Litman, 2009). Together with rapid growth toward peripheral areas, the distribution of opportunities such as jobs, food, health care, education, and so forth can be proportional to level of access that various locations can offer (Geurs & Ritsema van Eck, 2001). In these conditions, the distributional impacts of such opportunities can be highly disproportionally distributed among various population cohorts and certain groups can be more exposed to negative externalities of transportation such as pollution and noise and yet have a smaller share of benefits such as mobility and accessibility (Beatley, 1988; Grengs et al., 2013; Litman, 2021; Schweitzer & Valenzuela Jr, 2004).

Accessibility to jobs is a very common and well-established measure for transportation systems’ performance in the US for equity purposes. Studies have shown that Job accessibility is under influence of a set of built-environment and spatial factors that can affect multiple long- and short-term decisions of households, such as residential location choice, number of vehicles, commuting mode, and so forth (Cervero & Murakami, 2010; Chen et al., 2008; Ding & Cao, 2019; Ewing & Cervero, 2010; Renne et al., 2016). Historical data shows that such pattern of land development creates a highly polarized community as well as land market where marginalized people such as low-income households or racial minorities are forced to live in segregated neighborhoods. This unjust distribution of benefits and costs can further isolate certain neighborhood and populations, escalate equity issues, and stimulate urban anomalies, such as unemployment and crime rates (Anderson & Galaskiewicz, 2021; Kain, 1992; Massey, 2020).

From an equity perspective, it is thus imperative to understand the nature and spatial extent of the relationship between different job accessibility measures and marginalization of certain populations under different urban form typologies. Several studies have employed spatial statistical models to illustrate the relationship between job access and different socio-demographics on a spatial scale (Wang & Chen, 2015). Our study will first measure four gravity-based accessibilities for driving and transit with respect to job matching and competition concepts (Hansen, 1959; Pan et al., 2020) for Dallas-Fort Worth (DFW) and Houston-Galveston (HGAC) metropolitan areas separately, and then builds and compares eight models to find spatial associations between job accessibility and different factors. Finally, we derive implications for transportation equity from the spatial relationships between accessibility, urban form and socio-demographics.

DFW and HGAC regions, as the two of the top three largest growing metropolitan statistical areas from 2010 to 2018 in Texas and fourth and fifth most population regions in the nation (U.S. Census Bureau, 2019), are chosen for comparison in this study because: (a) the two regions has experienced fairly different growth patterns in recent decades, and (b) a study by Grengs et al., (2013) has shown that these two regions are among the top cities with
transportation equity issues. It is expected that this comparison of models would shed light on how different factors impact equity outcomes of transportation infrastructure within different urban forms.

Citations


Key Words: Job accessibility, Transportation equity, Urban form, Spatial Autoregressive Model

A FAIR RIDE: EXPLORING THE EQUITY IMPLICATIONS OF ZERO-FARE TRANSIT
Abstract ID: 823
Individual Paper

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Low-income and minority households throughout the United States commonly suffer from limited mobility. These households are limited to a shorter radius of travel which impacts the access they have to resources, goods, and services throughout the city. Disparities in access can contribute to heightened unemployment rates, health inequalities, and poor educational attainment within communities of color. The delivery of transit service is considered to enhance the mobility of this population given that low-income and minority households have lower auto ownership rates and are more likely to depend on alternative modes of transportation. The impact of transit can be muted due to the presence of barriers which deter use. Research has shown that fare affordability is a barrier of use which is especially pronounced for low income and minority residents. While the implementation of a zero-fare policy has the potential to addresses this barrier, the broader equity implications of this policy are relatively unknown as existing domestic research on the matter is light and highly theoretical.

This study provides explores the impact which the implementation of a zero-fare policy has on the mobility of this population. Particular attention is placed on how this policy impacts access to essential destinations/services which can greatly enhance quality of life and the ability to escape poverty (employment opportunities, healthcare services, educational opportunities, healthy food sources, etc.). Necessary data to conduct this study was collected via the use surveys with current bus transit riders in the greater Kansas City region where several transit service providers have recently implemented a zero-fare policy. Survey participants were asked questions regarding their travel behavior pre and post zero-fare implementation. Data was analyzed via appropriate regression models in order estimate the impact which zero-fare policy implementation has had on the generation of first-time transit users, the frequency of transit use, and access to essential destinations/services which can greatly enhance quality of life and the ability to escape poverty. The degree which the impact of zero-fare implementation varies across race, income, and other socio-demographic characteristics were also explored.

Findings from this study provide a clearer understanding on the broad equity implications associated with the implementation of a zero-fare policy. This can inform planning and policy decisions in a manner which can produce a system which better serves members of the population and is more equitable in nature.

Citations
TRAVEL BEHAVIOR AND TRAVEL SATISFACTION IN OLD AGE
Abstract ID: 829
Individual Paper
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Mobility is essential for older adults to stay healthy and independent. However, older people have unique mobility challenges due to a decline in physical and cognitive functions over time, resulting in less mobile and less travel. Covid-19 has highlighted the vulnerabilities of older adults in this regard; they were the hardest hit by the pandemic, as a result of months of staying inside, having few social interactions, and having fewer opportunities for travel and physical activity. To understand older adults’ travel behavior and their quality of life, this study examines the travel satisfaction of older adults in relation to travel behaviors and travel and personal characteristics. Based on a survey of 724 adults aged 50 and older in Utah, we analyzed the relationship between older adults’ travel behavior and travel satisfaction using the regression and general aggression model (GAM). Results show that travel behaviors vary by different age groups, personal and travel characteristics, and the built environment. We also find that travel satisfaction is related to older adults’ health, travel frequency, built environment, and social activities. By taking into account older adults’ different needs, wants, and values, this study provides better insights into travel behavior and travel satisfaction in old age. Findings will help develop future policies and planning to support and meet the needs of various transportation needs of the older adult population.

Citations


Key Words: older adults, travel behavior, travel satisfaction, aging, social interaction

INEQUITABLE INEFFICIENCY: A CASE STUDY OF RAIL TRANSIT FARE POLICIES
Abstract ID: 832
Individual Paper

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Transit fare equity research overwhelmingly measures equity based on pay disparities only, such as whether different riders pay more or less than others in total or on a per-mile basis. This measurement of equity ignores how cost and cost-effectiveness of service provision may vary. Using cost per rider metrics of stations, links, and time periods from a companion study to assign trip costs, and fare data to estimate trip-level cost recovery through fares, I estimate the spatial and temporal variability of cost recovery patterns across two rail systems, BART, in the San Francisco Bay Area, and MARTA, in the Atlanta region.

I find that cost recovery patterns are spatially monocentric with travel to and from outlying areas paying a lower share of costs, and that this pattern is attenuated but not absolved with distance-based fare structures. In addition, the weekday peak period recovers more costs through fares than other time periods. I find that stations with higher shares of riders who identify as Hispanic, Asian, or Pacific Islander and with higher shares of reported household income between $60,000 and $75,000 pay a lower share of costs in the BART system, while there is no statistically significant correlation between the socioeconomic makeup of riders and cost recovery in the MARTA system. Finally, subsidies flow to outlying areas and off-peak travel times. My findings, particularly in terms of temporal cost recovery patterns, diverge from past studies potentially because most research on transit cost variability looks at bus transit, BART and MARTA have limited peaking in their service output patterns, I employ far more granular data, and my cost allocation method is expressly long-term focused (i.e., exclusion of sunk costs).

Citations

- Parody, Thomas E., Mary E. Lovely, and Poh Ser Hsu. "Net Costs of Peak and Offpeak Transit Trips Taken Nationwide by Mode." Transportation Research Record.1266 (1990): 139-145

Key Words: Rail transit, Fare policy, Equity, Efficiency

PATH ANALYSIS OF PEDESTRIAN CRASHES AT MID-BLOCKS: A MICRO-LEVEL STUDY
Abstract ID: 845
Individual Paper

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Background: Pedestrian safety is a major concern, particularly in urban areas, as it affects the quality of life. Despite longstanding efforts to address this issue, pedestrian safety continues to be a significant challenge. Especially in the United States pedestrian crashes has not been able to decrease over the past decade.

The majority of pedestrian crashes occur at intersections and mid-blocks, with midblock crashes having unique characteristics that differ from intersection crashes, such as higher speeds and fewer traffic controls. For past decade, nearly 30% of fatal pedestrian crashes occurred in mid-blocks, highlighting the importance of studying these crashes.

Study Design: Theeuwes highlighted from the theory of "self-explaining roads" the strong connection between street design and user behavior. Given this, it is important to understand the micro-level details of streetscapes at mid-blocks, which can lead to certain behaviors that can lead to pedestrian crashes.

This study aims to examine the direct and indirect factors that affect pedestrian behavior and crash severity at mid-blocks using path analysis. The study uses path analysis to investigate the contributing factors that impact the both pedestrian behaviors and severity of crashes at mid-blocks. The model integrates variables from previous research that affect pedestrian crashes at the micro-level, along with variables such as distance to nearest intersection and land use type for each side of road that are indirectly impacted by the pedestrian’s behavior. Ultimately, this study will provides insights to reducing pedestrian crashes by enhancing the safety of streetscape for both pedestrians and drivers.

Expected Results: The results of this study can identify the pedestrian risk features and inform the development of planning policies and improve pedestrian safety at the micro-level. Additionally, the study will be beneficial for not only urban planners, transportation engineers, and policymakers but also for the general public for the awareness of safety at mid-blocks.

Conclusion/Contribution: The study aims to shed light on the streetscape-pedestrian crashes relationship and provide valuable insights to improve pedestrian safety by analyzing features of streetscape. Ultimately, this study provides a novel approach to studying pedestrian safety and highlights the importance of considering the influence of street features on pedestrian behavior and crashes.

Citations


Key Words: Midblock crash, Path analysis, Pre-crash actions, Pedestrians, Contributing factors

**BETTER ESTIMATES OF SHOPPING TRAVEL DISTANCE IN THE UNITED STATES**

Abstract ID: 853
Indiividual Paper

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How we shop in the US is changing, with an increasing reliance on online shopping and delivery services. The transportation and environmental implications of this shift are unknown. These services could ultimately improve outcomes through batching of trips to multiple residences. Alternately, they could worsen transport outcomes by replacing short trips to the store with much longer trips to central warehouses, utilizing heavier vehicles. The convenience of online shopping relative to the disutility of traveling to the store may also lead to additional shopping events.

A key piece of information in understanding the implications of the shift to online shopping is understanding what the transport impacts of in-person shopping are. A key challenge is that many shopping trips are chained with other trips, so travel distance must be allocated between trip purposes.

There are two methods often used in the literature to estimate shopping travel distances. One is to assume all shopping trips generate a round trip from home; this will overestimate travel distances in the case of chained trips. Some authors multiply the result by a correction factor to account for trip chaining, but this requires determining the correction factor to use.

The other method is to add the lengths of all trips that end at a shopping location. This could either over- or underestimate shopping travel. If someone drove 19 miles from work to a store, and another 1 mile home, it is probably not accurate to say they drove 19 miles to go shopping. However, if they did make a round trip to the store, only calculating the leg en route to the store will underestimate shopping travel.

In this article, we quantify how much marginal vehicle mileage is associated with shopping travel. We calculate marginal mileage by comparing the network distance of tours that involved shopping with “counterfactual” tours with the shopping stops removed. In cases where shopping was the primary purpose of the tour, we instead remove incidental non-shopping stops. We use detailed travel survey data from California and the Research Triangle region of North Carolina, and compute network distances for the actual and hypothetical travel.

We find that the marginal vehicle mileage generated by shopping trips is, coincidentally, comparable to mileage calculated by measuring only trips that end at shopping locations. This fortuitous finding suggests that existing research using this method describes shopping travel more-or-less accurately. We find that assuming round trips to the store results in overcounting mileage by roughly a factor of two.

Citations


Key Words: shopping, eshopping, vmt
THE IMPACT OF HEAT WAVES ON APP-HAILED RIDERSHIP IN LOW- AND HIGH-INCOME NEIGHBORHOODS IN NEW YORK CITY

Abstract ID: 858
Individual Paper

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As extreme weather events become more frequent due to climate change, it is important to understand their impact on travel behavior to help inform transportation planning for these events and develop climate-change adaptation plans. The deadliest of all inclement weather types, extreme-heat events have increased in frequency, intensity, and duration over decades (Hoffman et al., 2020). In New York City, the National Weather Services issued five heat alert days in July 2019. While heat alerts advise people to limit time outdoors to reduce exposure, transportation is an activity that may expose travelers to extreme weather. In this study, we investigated whether usage of travel hailed through apps such as Uber and Lyft changed during heat waves in New York City in July 2019 to replace modes that expose travelers to extreme heat. In addition, we explored if this change varied across low-income and high-income neighborhoods. We assumed a) extreme heat would prompt a higher usage of hailing apps compared to normal weather and b) the increase in usage would be higher in low-income neighborhoods compared to affluent areas. Our assumption rests on the following known travel patterns. 1) New York City has a higher degree of transit usage compared to other cities in the US (Schweitzer, 2017). 2) Walking to and from transit stops is an important segment of transit users (Pucher & Renne, 2003). 3) More than a third of of trips made by New Yorkers within county trips were in non-motorized modes such as walking and cycling for trips (NYMTC, 2014). 4) Low-income earners in the New York City area ride transit and bike or walk as the main mode for trips more than their affluent counterparts (NYMTC, 2014). Given these travel patterns, extreme heat events would prompt travelers to consider alternative means for their first and last mile and main trip including using app-hailed travel. We assume, app-hailing increase rate would be higher in low-income areas as low-income earners would be exposed to inclement weather more than their affluent counterparts due to their travel pattern.

We examined days under the issuance of heat alert in comparison to normal-weather, same days of the week in the preceding and following weeks in July 2019. We used publicly available app-hailed trip data, demographic information, and datasets pertaining to the built environment and to transit access to conduct descriptive and multivariate regression analyses. The findings indicate that on days heat alert was issued, there was an increase in rate of ride-hailing app usage across the city compared to respective comparison dates with no heat alert. The study confirms findings in previous studies that examined the effect of rain on TNCs that deviation from normal weather affects travel hailed through apps (e.g. Brodeur & Nield, 2018). Contrary to our assumption, the findings indicated that as the rate of increase in app-hailed travel was much higher in affluent neighborhoods more than in low-income neighborhoods. This reveals that high-income New Yorkers switched to a comfortable travel mode during heat waves more than their low-income earning counterparts even though the latter are exposed to extreme heat more due their travel pattern. We recommend that transportation planners and policymakers consider the possibility and viability of extending special service offerings in low-income neighborhoods during heat waves as part of equity-informed solution to impacts of climate change on transportation activities. Our study aims to contribute towards creating knowledge about the impact of heat waves on transportation in general as well as on app-hailed travel. To our knowledge there have only been a few studies that examined travel and heat waves and none on app-hailed travel and heat waves.

Citations


Key Words: transportation and weather, Uber and Lyft and weather, heat waves, travel behavior, app-hailed travel

#ONEMORELANE: STATE DOT MESSAGING ABOUT HIGHWAY EXPANSIONS ON SOCIAL MEDIA

Abstract ID: 865
Individual Paper

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While many states continue to invest in urban highways, leaders in other states have taken a different route. Colorado canceled two major highway expansion projects and declared that no new highways would be constructed in the state. Washington State’s Transportation Secretary has made similar proclamations, though no formal legislation or regulations have been passed.

In the high-stakes and fast-paced setting of social media, how do state DOTs manage their messaging about roadway projects? To characterize state-by-state differences in framing, we systematically review social media posts in several states. This work reveals that state DOT communications offices have taken diverging approaches to discussing expansion projects. For example, Washington State DOT’s has publicly declared “simply put, we cannot build our way out of congestion” and WSDOT districts engage in the issue on social media. Conversely, Georgia DOT promotes its highway expansions extensively on social media, posting: “You asked for it, so we’re giving you one more lane.”

To understand the decisions underpinning communication decisions, we conduct interviews with agency staff. Together, these case studies reveal considerable variation in communication, highlight the risks and rewards of embracing new messaging, and offer some pieces of advice for agencies considering a change in their communication practices.

By focusing on public-facing communication, this work complements published work on the inclusion/omission of induced travel in environmental review documents (Volker et. al. 2020) and in short-term funding documents (i.e., Transportation Improvement Programs; see forthcoming research from Amy Lee). Moreover, this work is important because patterns in DOT messaging are likely to profoundly shape public sentiments for several reasons. For one, policymakers and the public alike tend to defer to agency expertise on roadway needs and prioritization. Many also unquestionably celebrate the arrival of federal funds. Finally, because the public largely misunderstands induced travel (Ralph et al. 2022), they are likely to believe the agency’s claims about whether another lane will or will not address congestion.

Citations

Just over one in six American urban commuters works nights or evenings (APTA, 2019). These workers report lower levels of life satisfaction and mental health (Brown et al., 2020; Palm et al., 2023), likely due to the social impacts of schedule misalignment between these workers and their friends, loved ones, and broader society (Brown et al., 2020). Small sample research suggests that these workers participate in fewer activities (Ahmad Termida et al., 2016), though results derived from larger samples are mixed (Palm et al., 2023). Despite increased research into the role of household behavioral interactions in shaping travel behavior (Timmermans & Zhang, 2009), no research to date examines how a shift worker’s mis-aligned schedule impacts the travel behavior, activity participation, and transportation resource allocation among other householders. This paper presents exploratory analysis of the impact of shift work on the worker’s household by answering four interrelated questions:

How does parental participation in shift work impact children’s travel behavior and activity participation?
How does participation in shift work impact allocation of household errands and associated travel by gender?
How does shift work impact on the sustainability of travel patterns, including VMT and mode choice?

I will analyze the 2017 National Household Travel Survey (NHTS) to answer these questions. The survey does not contain information on typical work shift. However, I will infer work shift using work hours documented in the travel diary in line with an existing method applied to time use surveys (Palm et al., 2023).

Each research question will first be explored using summary statistics. Then, I will present results of multivariate modeling aimed at providing answers to these questions that control for confounding factors. Applied statistical techniques will include binary logistic regression and time use allocation models. The results will provide a range of relevant insights for transportation planners working in metropolitan areas with high proportions of shift workers. First, this work will help planners consider how to support children affected by shift work. Second, it will help planners understand how shift work in their communities prevents the adoption of sustainable transportation. Additionally, this research will offer insights into how to improve the delivery of sustainable mobility to households affected by shift work.

Citations


Key Words: travel behavior, sustainable transportation, gender, transportation equity, shift work

DEEPPENING THE UNDERSTANDING OF HOUSEHOLDS WITH CHILDREN AND THEIR TRANSPORTATION CHALLENGES: A CASE STUDY IN SOUTH LOS ANGELES

Abstract ID: 879
Individual Paper

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A lack of reliable and affordable transportation exacerbates socioeconomic inequities for low-income communities, especially people of color. Low-income households with children can be particularly disadvantaged because of their complex travel needs and relatively low car access rates. Traditional approaches to addressing transportation disparities focus primarily on public transit: improvements to transit service in underserved communities and low-income fare subsidies. However, research shows that households have far greater access to opportunities by automobile than by public transit, resulting in improved outcomes such as employment, health, and neighborhood quality. Transit improvements may have even more limited success for households with children since complex travel patterns are not well-served by public transit.

In light of this limitation, some urban areas are experimenting with a new approach: universal basic mobility (UBM) pilot programs that provide modest financial support for transportation purposes. The backbone of these programs is a “mobility wallet,” a financial tool given to select participants that allows them to pay for certain mobility options (e.g., public transit, carshare, ride-hailing, and shared bikes/scooters). Los Angeles Metro and the Los Angeles Department of Transportation recently launched the largest program in South Los Angeles.

The larger research project examines how households with and without children benefit from the Los Angeles universal basic mobility pilot program. The data come from multiple semi-structured interviews and surveys with 40 low-income individuals living in the program area, half of whom have children. The survey asks about typical travel behavior, transportation spending, and insecurity. In contrast, the interview guide asks more in-depth questions about the motivations behind these travel decisions, how participants feel, and their day-to-day experiences. Interviewees include a mix of women and men and households with varying access to automobiles (e.g., 0-vehicle households, households with fewer vehicles than adults, and households with at least one vehicle per adult). We will transcribe and analyze all of the interviews using thematic content analysis and pair interview themes with survey responses.

We hypothesize that households with children have greater transportation challenges and, consequently, a greater
need for modal flexibility than those without children. In this paper, we draw on our baseline interviews and surveys to highlight disparities in the transportation experience of households with and without children. The findings include differences in experiences related to travel (activity participation, travel mode), transportation challenges (access to services, reliance on others, costs), vehicle access, and household budgeting. We further compare motivations for signing up for the program and what types of needs each group thinks will be met with the transportation funding.

Existing studies often rely on travel survey data to analyze how parents’ revealed travel behavior is explained by having children in their household. These data capture the who, what, when, and modal travel choices but cannot capture the circumstances behind these revealed behaviors. Through this qualitative research, the interview data for this study captures a more detailed understanding of the unique transportation experiences and challenges of adults with children, why people select their transportation modes, or the quality of life trade-offs they endure. The findings will inform the larger evaluation of UBM and underscore the importance of programs and policies to develop a multi-modal and affordable transportation safety net that addresses the needs of households with children.

Citations


Key Words: Universal Basic Mobility (UBM), transportation experience, travel behavior, households with children, qualitative methods

HIGHWAY EXPANSIONS: WHO, WHAT, AND WHY?

Abstract ID: 895
Individual Paper

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The transportation sector contributes to a myriad of social and environmental problems, ranging from global climate change to community severance to localized air pollution. These problems have been noted in policy documents (e.g., the Sixth Assessment Report of the International Panel of Climate Change) and some policy per se, such as the federal Infrastructure Investment and Jobs Act in 2021 and statewide policy in states like California and Colorado. But even as wildfires, heat waves, floods, and hurricanes batter people around the globe and high fuel prices motivate people to look for alternatives to driving, states like California -- considered to be a forerunner in climate policy -- continue to spend billions of dollars each year on new highway capacity.

People in the highway policy arena -- policymakers, transportation planners, engineers, state officials, lobbyists --
continue to support highway capacity expansions despite decades of research showing that increasing highway capacity severs communities and induces more passenger driving and freight traffic, which causes air pollution and global climate impacts and generally negates any initial congestion relief in the long run (1). Why, then, do transportation policy actors continue to expand highways when they contravene other policy goals? Who is influential in driving these capacity projects, what problems are they trying to solve, and what solutions do they consider? And, what factors and policy beliefs motivate their advocacy?

This research investigated these questions of power, problem definition, analysis of solutions, and policy beliefs – questions of governance that are often ignored in the transportation policy literature (2) but are defined in the policy process literature (3) – through a series of key informant interviews around three case study highway expansion projects in California. Through 49 interviews with state and local policymakers, transportation planners, engineers, agency staff, lobbyists, and advocates, we explored the factors that motivate transportation policy actors to spend billions of dollars and significant political capital on highway expansions. We identified influential actors in the highway policy arena such as labor unions, the construction industry, local governments, and department of transportation districts. We identified problems that policy actors are trying to solve with new road capacity, finding that short-term congestion continues to be a powerful motivating problem for politicians and practitioners alike. Congestion relief is proposed as a solution for localized air pollution, especially in areas with significant freight traffic, and policy actors often omit induced vehicle travel from their air quality calculus. Congestion relief through highway expansion was also proposed as an “equity” solution, as policy actors look to use expanded highway capacity as a solution for long commutes into areas with unaffordable housing markets. Further, we found and explored circumstances in cases where community-led coalitions were successful in delaying and ultimately halting a highway expansion project.

Citations


Key Words: Transportation policy, Highway expansion, Decisionmaking

HOW DO TEXANS PERCEIVE THE SOCIETAL IMPACTS OF AUTONOMOUS VEHICLES? SMALL TOWNS VS. LARGE CITIES

Abstract ID: 897
Individual Paper

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People’s perceptions of Autonomous Vehicles (AVs) are critical to understanding their roles in future transportation systems. Most previous work on people’s perceptions of AVs’ societal impacts was based on large metropolitan areas. This study adds a unique perspective from small and rural communities. We carry out an online survey using Amazon Mechanical Turk (MTurk), to investigate how Texans perceive the societal impacts of AVs, and how the perceptions vary from small towns to large metropolitan areas. MTurk has previously been used to gauge perceptions of AVs and is a widely accepted research tool. The questionnaire is based on essential
questions from Schoettle and Sivak (Schoettle & Sivak, 2014) and Pew Research Center (Pew Research Center, 2017). Key variables include basic socio-demographic characteristics and outcome variables reflecting AV impacts identified from the abovementioned literature. The responses to AVs impacts are recorded using a five-point Likert scale. Using descriptive statistics, factor analysis, and structural equation modeling, we identify several factors that explain respondents’ perceptions of AVs and their impacts. We expect to find differentiated perceptions between small towns and large metropolitan areas. Specifically, residents of small and rural communities would be more enthusiastic about the development of AVs, compared to those living in large metropolitan areas. This is primarily because such areas have low population density, lack adequate public transportation services, far and few activity centers, which combine to make it challenging for residents, especially low income and people with disabilities, to fulfill their essential travel needs (Pucher & Renne, 2005). AVs would potentially provide much needed transportation alternative and improve mobility of transportation-challenged people in these areas. Furthermore, such differentiation would be more prominent among older residents as they would be more independent to perform their daily chores and not depend on others for travel purposes. The findings from this study serve as empirical evidence about the acceptance and adoption of AVs in small and rural communities, which have been overlooked in previous discussions on planning for AVs. Results from this study help policymakers and transportation planners make informed decisions regarding the future deployment of AVs in communities of various sizes.

Citations


Key Words: Autonomous Vehicles, Small Towns, Rural Communities

WHO USES FLEXRIDE MILWAUKEE? LESSONS FROM A NEW EMPLOYMENT-BASED MICROTRANSIT SERVICE

Abstract ID: 900
Individual Paper

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Microtransit is an emerging form of transportation that has the potential to be more affordable for low-income individuals than existing ride-hailing services (Bills et al. 2022; Xing 2022) and more cost-effective than fixed-route transit service in lower-density areas (Macfarlane et al. 2021; Xing 2022). Previous studies suggest users are less likely to be regular fix-route transit riders (Xing, et al, 2022). Still, relatively little is known about who uses microtransit, including differences between occasional and frequent riders.

We studied FlexRide Milwaukee, an on-demand, microtransit service pilot-tested in 2022 to connect low-income workers and job seekers from predominantly Black neighborhoods on the northwest side of the City of Milwaukee with predominately white, employment-rich suburbs. The employment-focused service ran on weekdays between 4:30 am and 11:30 pm and helped FlexRiders reach jobs located approximately one to five miles beyond existing fixed-route transit stops. The service was subsidized by a National Science Foundation grant and provided by a national microtransit company. Drivers were contracted to use their personal vehicles to serve riders who booked
rides through the FlexRide Milwaukee App or telephone operators. FlexRiders were picked up and dropped off at the nearest street intersection of their choice and in employer parking lots. One-way rides were either free or $1.50, depending on the zone in the City of Milwaukee. FlexRide Milwaukee served 128 unique riders, reached 63 unique job sites, and provided more than 3,000 total rides during the six-month pilot test.

We ask: what factors are associated with occasional or frequent use of FlexRide Milwaukee? To become eligible to use the service, people were required to complete a brief survey and enroll as study participants. We offered gift card incentives for participants to complete longer surveys before using FlexRide and at the end of the FlexRide pilot. Of 713 eligible applicants, 428 participants applied for an access code so that they could use FlexRide, and 128 used the service.

Most FlexRide participants (92%) did not own a car. 61% were women, 60% were younger than 35, 58% made less than $1,500 per month, and 45% did not have a job when they applied. Service flexibility was important: 46% of participants with jobs either worked third shift or had inconsistent or unknown schedules, and 12% of rides were booked by phone rather than the app.

Using trip data from when the final service design was in effect (April 18 to September 30, 2023), we categorized the 428 participants into three groups: 80 frequent riders (at least one week with five or more rides), 48 occasional riders (at least once (versus not riding) if they were employed, higher-income, Black, male, or able to pay by credit card. Participants with these characteristics also rode more frequently. People who found out about FlexRide through word-of-mouth were also more likely to be frequent users, but participants who worked the third shift or reported shorter bus waiting times rode less often. More research is needed to understand why women and people who needed to pay by cash did not use FlexRide as much as indicated by their initial interest.

Our results are important for informing the development of new microtransit services. Microtransit can potentially fill gaps in fixed-route transit systems, but it is likely to serve specific segments of the population. Understanding this is a key step toward creating systems that serve users based on their characteristics and needs.

Citations


Key Words: Microtransit, Socioeconomic characteristics, Ride frequency, Equity
The “15-minute city” is a planning concept that has gained significant traction since the mayor of Paris adopted the motto as an urban agenda. A 15-minute city is one where people living in any neighborhood can access health care, supermarkets, their workplace, schools, and parks on foot within a 15-minute walk.

An extensive literature on the effect of built environment upon travel patterns suggests that a densely-developed, mixed-use, pedestrian-oriented environment can increase alternative mode use and decrease driving; that a regional scale and combinations of built environment factors are highly influential; that off-street parking availability may be the strongest single influence on reducing driving and consequently on increasing walking; and that transit access is usually found to be less important than other built environment factors.

What does this literature mean for the likely efficacy of the 15-minute city approach in the US context? On the positive side of the ledger, it is empirically true that activity accessibility measured in 15-min walksheds is highly predictive of local trip making (though not only of walk trips). In the United States, as well, the share of trips carried out on foot is much higher than the other alternative modes, suggesting that a planning paradigm premised on walking might just work. And in comparison to other transportation infrastructure, sidewalks and other amenities for convenient and safe walking are relatively inexpensive. But the literature also suggests that multiple built environment characteristics in combination, measured regionally, and accounting particularly for parking availability, are most influential—not activity accessibility on its own.

There is also reason to question whether providing a 15-minute city will significantly reduce driving and increase walking based on existing travel and land use patterns in the U.S., which are our inevitable starting point. In this paper I use data from the most recent National Household Travel Survey of 2017, from regional travel diary datasets, and from supplementary data on land use and the built environment, to explore how and under what circumstances activity accessibility is predictive of walking when accounting for other potentially more important built environment factors. I find that these patterns imply many significant challenges in successfully following a 15-minute city approach in US cities, even the densest.

Based on these results I argue a different policy approach is needed to the conventional understanding of the 15-minute city. First, the small scale of the walkshed is an impediment to needed change. Interventions need to be at the scale of the city across multiple market-provided built environment characteristics. Second, zoning impedes housing markets, and if anything the balance is a need for more housing; but the 15-minute city is myopically focused on the nonresidential side of the equation, particularly on retail, which is an increasingly losing proposition in the world of development. Third, policies to improve the public realm, particularly the safety and convenience of walking, are more immediately effective than development policies anyway, as I illustrate with examples.

I conclude by arguing that the 15-minute city has been portrayed as a way to improve one’s own life, rather than as a pursuit of improved sustainability and of improving conditions for people who do not rely on cars. This is a characteristic of a political, somewhat cynical approach to transportation planning that emphasizes convenience and choice, rather than the necessary steps of, first, making auto use more difficult to reflect its true social costs, and second, focusing on improving access for the most disadvantaged urban residents.

Citations

Women face greater transportation related barriers to accessing employment opportunities and bear greater commute travel burdens compared to men, globally. Lack of inclusivity within the transportation environment and persistent gender disparity in access to household transportation resources as well as time allocation across activities due to sociocultural norms are, in part, to blame (e.g., Chidambaram & Scheiner, 2020). Literature suggests that women, especially married women with children, face greater pressures than men to restrict their job search boundaries considering proximity to home (e.g., Crane, 2007; Le Barbanchon et al., 2020). Conversely, many women are compelled to spend relatively more time commuting via less desirable travel modes than men, leading to higher opportunity costs and greater exposure to hazardous environments. When households are mobile, women are more likely to choose a residential location closer to the workplace, often at the cost of higher housing expenses, than men (e.g., Wachter & Holz-Rau, 2022); and married households with small children are likely to locate closer to the woman’s workplace for the woman to save on travel time and engage in childcare related activities. The various adjustments and compromises in employment and residential location choice that women need to make result in undesirable gender differences in job satisfaction, income, productivity, and overall quality of life. Gender-sensitive transportation system design and policymaking are essential for addressing this inequality.

In this paper, we use India’s nationally-representative 2019 Time Use Survey (TUS) data to elucidate and examine gender difference in commute time as a means to gain new insights into gender disparity in employment opportunity as well as commuting time budgets in a rapidly growing economy of the developing world. We are specifically interested in investigating how gender difference varies with household structure – particularly as employed individuals get married and enter parenthood. We conduct our analysis with 46,902 employed male and female respondents belonging to 14,262 households who reported living in one of the following household arrangements – single (unmarried) household; dual-earner married couple household without children; dual-earner couple household with at least one small child under six; dual-earner couple household with six-plus children only. We first conduct a descriptive comparison of average daily commute time between men and women belonging to the four household types across various locations and sociodemographic circumstances. Next, we perform a person-level regression analysis of factors including gender, household composition, income, education, geographic location and occupation that determine individual commute time. We also interact various factors with gender to explore moderators of the gender-commute time relationship. Finally, we conduct an intra-household analysis of man vs. woman commute time difference and explore factors including presence of small children, income and education difference, occupations, location, etc. that are associated with the difference.

Results of our analysis highlights that significant gender difference in commute time exists in India – on average, and at the intra-household level – and that the difference varies with household structure. Marriage and parenthood, for example, widens the gender divide, indicating reduced employment opportunities for women or household location adjustment to minimize women’s commute and out-of-home activity time. The gender disparity varies across urban vs. rural India, and across sociodemographic profiles. While much of the observed difference is attributable to sociocultural norms that are outside the control of planners and policymakers, we offer recommendations of strategic transportation investments, land use planning and organizational policies that can both reduce the gender commute gap as well as expand employment and other opportunities for women who face unjust out-of-home activity time constraints.

Key Words: Commuting, Gender, Transportation, Employment, Inequality

SPATIAL PATTERNS OF NIGHT COMMUTING BY WOMEN ON FOOT
Abstract ID: 934
Individual Paper

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Planning for commuter travel (to and from the workplace) tends to focus on the morning and evening peak periods, during which the majority of such trips take place. However, many shift workers must travel to and from work at night. The spatial patterns of night commuters are distinct from those with more typical work schedules, and these workers have very different needs. This may be particularly true of female night commuters. Women may avoid discretionary travel through public spaces at night for a variety of intersecting reasons (Loukaitou-Sideris, 2005). Women might avoid walking at night due to safety concerns, fear of crime or harassment, and social norms around gender roles and behaviors may play a role in shaping these differences (Keane, 1998; Whitzman, 2007). Women may feel more vulnerable to the risks associated with walking alone, especially after dark, which could discourage them from choosing transit as a mode of transportation (Loukaitou-Sideris & Fink, 2009). Women who work in jobs that require them to arrive or leave at night have less opportunity to avoid spaces in which they feel vulnerable, which makes it all the more important for planners to provide safe comfortable infrastructure that can serve these trips.

A lack of data is an important barrier to planning for night commuting by female pedestrians. For example, the 2009 Korean Time Use Survey conducted by the Korean Statistical Institute (KOSTAT) includes records on nearly 32,000 commute trips, but only about 2.5 percent of those took place between the hours of 10:30pm and 5:00am. With such a small sample size, disaggregating travel patterns by mode, gender, and age becomes impractical. Passively collected data from mobile devices’ location-based service (LBS) represent an opportunity to overcome this limitation of traditional travel surveys.

The Seoul Metropolitan Government publishes a detailed origin-destination data based on LBS data. The data are aggregated to the level of Seoul’s 426 neighborhoods (dongs) and disaggregated by trip purpose (home to work, work to home, and other), age, gender, date, and arrival and departure times. Since the LBS dataset does not distinguish between walk trips and other modes, we used data from the Passenger Travel Survey of the Korea Transport Database to predict the probability that a trip takes place by walking, based on its estimated travel speed. We apply these probabilities to identify the spatial distribution of nighttime commute trips that take place by walking, and to identify differences by gender, age, and characteristics of the built environment.

We find that gendered differences in the propensity to walk to work are exacerbated for commute trips that take place at night. Additionally, we identify distinct travel patterns for women taking trips at nighttime, including a higher prevalence of short trips between neighborhoods. Our findings have important implications for transportation policy and urban planning, as they suggest the need for targeted interventions to improve the safety and accessibility of walking at night for women. Understanding the specific travel patterns of women at
night can help inform policies and interventions that promote safe and accessible walking environments for women, as well as improve access to essential services and destinations. Moreover, this method can be applied to study the travel behavior of other small populations that might otherwise be overlooked.

Citations


Key Words: Night Commuting, Walking Trips, Pedestrian, Gendered Travel Behaviour, Location-Based Service (LBS) Data

DOES BUILDING RAIL BUILD SUPPORT FOR TRANSIT?

Abstract ID: 935

Individual Paper

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Does building rail build support for transit? This paper examines this question using confidential nationwide (U.S.) data from the General Social Survey from 1993 to 2021. Using a regression discontinuity approach, I estimate the degree to which the announcement and construction of light, heavy, and commuter rail projects across the United States has a measurable effect on the local public’s support for mass transportation funding. Results will be presented for each mode separately, and accounting for both the announcement, construction, and commencement of operations of new rail lines. I will explore nuances as well, for instance by grouping rail projects by the degree to which their first-year ridership met ridership expectations. The results will have implications for how practitioners market transit projects. More broadly, it will help us understand whether our investments in rail in recent years have led to a public more—or less—hungry for further investments.

Citations


Key Words: public opinion, transit, funding, rail

GETTING TO THE SHOPS: TOWARDS A BETTER UNDERSTANDING OF TRANSIT-BASED RETAIL ACCESSIBILITY FOR OLDER PEOPLE IN MONTREAL, CANADA

Abstract ID: 937

Individual Paper
Older adults represent a significant proportion of the Canadian population (Statistics Canada, 2023). As independence in mobility tends to decline with age, many older adults may not have access to a car or may need to “give up the keys” due to changing abilities as they age (Wasfi & Levinson, 2007). To ensure older Canadians can reach their desired destinations without driving, an increased focus on the provision of public transport that suits their needs is required. More particularly, little is known about which destinations seniors would like to access and how to make public transport a preferred mode for them to reach their desired destinations (Ravensbergen et al., 2022). Previous research has shown that enhanced accessibility, the ease of reaching destinations (Hansen, 1959), by public transport to jobs is associated with increased public transport mode share (Cui et al., 2020). In the case of older adults, accessibility to jobs acts as a proxy to access to services since most of them are in the retirement phase of their life. The goal of this research is to better understand the mismatch between objective and perceived measures of accessibility to retail jobs by public transport among older adults in Montréal, Canada.

A comprehensive online bilingual survey capturing the public transport and daily travel experiences and needs of older adults was conducted in February 2023. Multiple recruitment methods were applied to ensure the robustness of the collected sample, such as distribution of fliers at senior homes, social media advertising, mailing lists of senior centers, and recruitment through a marketing company. Firstly, respondents identified the public-transit travel time they consider reasonable to reach a desired destination by public transport (N=1,439). This information was then used to decide the travel time threshold to be used to generate cumulative opportunities measure of accessibility. For those respondents who indicated having satisfactory access to retail destinations in this reasonable travel time (N=961), cumulative accessibility measures to retail jobs by public transport are calculated at the census tract level. Each census tract centroid and corresponding accessibility level is then associated to the respondents’ home location, representing their perceived level of accessibility to retail destinations.

The findings indicate that the most common reasonable public-transit travel time was 30 minutes across the region. For these respondents, the level of accessibility that would allow the majority of them to access retail destinations in their desired 30 minutes is around 3,500 retail jobs. This suggests that planning for this level of retail accessibility could increase the probability of older Montréalers taking public transit to reach their desired retail destinations from their homes.

The results presented in this research can be of value for practitioners aiming to integrate aging considerations in transport planning and can support the broader adoption of tested accessibility measures to improve public transit services for people over 65 years old.

Acknowledgements: The authors would like to thank Thiago Carvalho dos Reis Silveira and Hisham Negm from McGill University for their help in developing and administering the survey for this research, and Merrina Zhang and Isabella Jimenez of the NRC for their contribution to this project. This research was funded by the Natural of Canada (NRC) project number AiP-023-1. The content and views expressed in this article are those of the authors and do not necessarily reflect those of the Government of Canada.

Citations


Key Words: Accessibility, Transportation, Public Transport, Older Adults, Retail

UNDERGRADUATE STUDENT-LED ENGAGEMENT TO INCREASE DIVERSITY IN SAMPLES FOR TRANSPORTATION RESEARCH
Abstract ID: 979
Individual Paper

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Diversifying racial and ethnic participation in research studies contributes to the generalizability of findings, yet barriers remain in recruiting minority populations (Yancy et al., 2006; George et al., 2014). The global pandemic has compounded the issue for researchers as study populations, particularly undergraduate students, suffer from survey fatigue (Fass-Holmes, 2022). A research team at Florida Atlantic University aimed to increase and diversify undergraduate student participation in a U.S.-based randomized controlled trial (RCT) in transportation planning (Merlin et al., 2022). To accomplish this goal, the team employed a diverse group of students to engage with the target population. This study asks, how can incorporating student-led engagement enhance research study recruitment? What benefits may accrue? This paper outlines the methodology and recruitment results of the “student ambassador” approach, as well findings from a focus group with the student ambassadors. Preliminary outcomes show promise for enhancing response rates and increasing the diversity of participation, in addition to the benefits experienced by the student ambassadors.

This paper documents the contribution of the Improve Your Commute (IYC) Student Ambassadors program to the RCT study recruitment efforts. To address R1 how student-led engagement can enhance research, the researchers examined the RCT study results and descriptive statistics. Participants in the RCT who completed the survey reported how they heard about the study. The results of this question revealed the perceived effectiveness of the Ambassadors’ efforts compared with other recruitment methods. In addition, demographic statistics of the participants provided by the academic institutions revealed the diversity of study participants. The effectiveness of the methods (“how they heard about the study”) was analyzed and reported by race/ethnicity. To address R2, what benefits of student-led engagement may result, the team conducted a focus group with the Improve Your Commute Ambassadors. The focus group showed how the student ambassadors perceived their contribution to the project and their effectiveness.

Innovative research methodologies may lead to more inclusive transport planning (Porter & Dungey, 2021). For researchers seeking ways to diversify online survey participation, strategizing a marketing plan that includes in-person engagement may be useful. The FAU team incorporated an array of methods. Among the ways people learned about the study, traditional strategies such as digital methods (email, learning management platform advertising) and print advertising remained key. However, about 9 percent of participants reported Ambassador activity (in-person interactions and social media) as a way they heard about the study. Alignment of institutional marketing efforts (emails, signage, digital learning platform) with the efforts of the Ambassadors team likely served as an awareness multiplier. Additionally, the research team achieved its goal of recruiting a diverse
population in terms of ethnicity reflective of the overall student population.

Furthermore, the Student Ambassador approach provided a way for the Ambassadors to learn more about the research process, gain communication skills and confidence, and add to their work experience. Ambassadors reported it as a positive experience. To the extent that Student Ambassadors support the study’s intent, further benefits may accrue. Since the study’s goals resonated with students—improving access to commuting options, conserving financial resources, improving academic outcomes—they perceived themselves as performing an advocacy role as well as an informational and engagement role.

Citations


Key Words: Diversity in research, Undergraduate research, Transportation planning research

WALKING OUR WAY TOWARDS SUSTAINABLE MOBILITY TRANSITION: HOW WALKING TO SCHOOL INFORMS ACTIVE TRAVEL IN ADULTHOOD AND FOR THE NEXT GENERATION

Abstract ID: 985

Individual Paper

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It is generally established that automobility is deeply entrenched in the United States, and that shifting away from automobile dependence will require a critical mass of people adopting sustainable travel behaviors (Handy et al., 2005; Saelens et al., 2003). Yet there is much to learn about how individuals learn, adopt, and promote sustainable transportation behaviors (Janke et al., 2021).

Based on a representative sample of the urban and suburban adult population in the United States (N=2,155), we used a series of logistic regressions to explore the relationships between (i) Adults’ past travel behaviors as kids on the way to school, with a focus on walking, and current choices and preferences related to walking; (ii) Adults’ school travel behaviors as kids and whether their own children walk to school today, among the subset of 165 adults who reported having at least one child in grade school; (iii) Adults’ walking habits and preferences and whether their own children walk to school today. Potential confounders, including household, parent, and child demographic factors, location of residence (US region, and suburban versus urban area), and home-school trip characteristics (distance and car availability) were controlled in the models.
Our results suggest that active travel is a learned and transmittable behavior. First, we found that the experience of walking to school had long-lasting impacts on transportation choices and preferences in adulthood. Having been exposed to walking daily as a kid, on the way to school, significantly increased the odds that walking becomes a significant part of adult life. All else being equal, people who walked to school as a kid appeared to have greater odds of liking walking very much as an adult; seeking a walkable neighborhood when relocating; and walking daily for transportation than those who did not walk to school. Second, we demonstrated that having walked to school as a kid largely influenced whether one’s own kids walked to school. Holding all predictor variables constant, the children of parents who walked to school as kids had odds of walking to school themselves that were 3.7 times greater than the children of parents who used other modes. Finally, a somewhat surprising result was that just being a parent that walks regularly does not predict whether their children walk to school. It is the experience of walking to school as a child that makes parents more likely to have children who walk to school.

We conclude that familiarity with non-car-based mobility is a formative experience that is key to achieve a sustainable mobility transition over generations. Planning should promote programs and policies beyond the Safe Routes to School program to expose children to walking (as well as biking, and other sustainable transportation modes) on a regular basis from an early age.

Citations


Key Words: Active Travel, Mobility Transition, Sustainability, Safe Routes to School, Walking

TENDERING AS A COORDINATIVE GOVERNANCE TOOL: UNDERSTANDING THE ROLE OF THE TENDERING PROCESS IN INTEGRATING PRIVATE TRANSIT OPERATIONS

Abstract ID: 994
Individual Paper

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Coordinated services are essential to the usefulness of public transport, and to achieving high ridership (Lee & Vuchic, 2005), which is necessary to achieve climate goals, and ensure equity of access to essential services and economic opportunities. Governance structures can add barriers to service integration, or reduce them. Metropolitan travel involves routes that cross jurisdictional or operator boundaries, sometimes requiring what Jarrett Walker describes as “politically required connections” (Walker, 2012), or transfers that are produced as a function of the governance system, not for the sake of creating the most efficient or useful transit service, creating barriers to accessing opportunities for people who depend on public transit. Understanding the governance geography, as well as the system for developing formal relationships that facilitate cross-jurisdictional coordination can help minimize their occurrence.

Researchers have examined the impact of fragmentation of services, finding that transfers from one operator to another make the service less useful to the rider, cost additional time to make the trip (Lee & Vuchic, 2005), and...
can reduce ridership by anywhere from 25-55%, depending on the difficulty of the transfer (Liu et al., 1998). Integration across transit agencies within a given metro region is a common challenge for such basic functions as fare collection, schedule coordination, and facility sharing, among others (Rivasplata et al., 2012).

Particularly in Europe, there has been privatization of services, which are tendered to private operators that bid in a competitive process, though public authorities often retain the power to define such services (Pettersson and Hrelja, 2020). This has created a method to match services to the appropriate scale, but also has created a new source of operator fragmentation (Pettersson & Hrelja, 2020), requiring further research on cross-operator service integration strategies.

Level of government plays an important role (Veeneman and Mulley, 2018) in governing transit, which is a mode not easily fixed at a particular level. This is due to the need to connect places that are governed at different scales, and by different jurisdictions. Previous scholarship has found that larger tenders and more integrated tenders should facilitate further cooperation across providers (Veeneman & van de Velde, 2014), but more work is needed to understand both the potential and limitations to their role as an integration tool.

We examined Israel’s system due to its high degree of top-down funding and political decision-making. This proved a strong counter-example to previous work on the highly localized nature of transport governance and funding in the United States. This qualitative study uses interviews of key members of the government, private operators and municipalities to understand the role of formal institutions in coordinating ticketing, schedules and stop location across multiple jurisdictions across the country. This research adds to existing theory by understanding the viability of tendering agreements as a tool for integration and coordination, as an alternative to governance institutions purpose-built for the scale of each transit line or cluster of lines. We ask how integration was effected, what challenges were overcome, and how effective this was. The study closes with findings that Israel has achieved coordination despite a large number of separate companies, and fragmentation across operators. Flexibility over time has helped to refine this coordination with each new tender. However the results have been confined to the bus system, with poor coordination across modes (bus/rail), and results that are unsatisfactory to local municipalities, which are often not included in the decision making process. In this case, the use of a higher level of government to effect coordination has been effective for cross-service integration, though it has impeded their ability to adapt to local needs.

Citations


Key Words: Transportation, Fragmentation, Governance, Collaboration, Multi-Level Governance

TRAVEL BEHAVIOUR CHANGES AMONG POST-SECONDARY STUDENTS AFTER COVID-19 PANDEMIC – A CASE OF GREATER TORONTO AND HAMILTON AREA, CANADA

Abstract ID: 998
Individual Paper

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Central Theme: The COVID-19 pandemic led to short-term changes in travel behaviour and a shift from public transit use to automobiles has been reported in recent research (Currie et al., 2021; de Haas et al., 2020). Speculatively, the short-term changes in travel behaviours of young adults may lead to new habit formation (Kuhnimhof et al., 2012; McDonald, 2015), which will have important implications for longer term environmental sustainability and future transportation infrastructure. We examine this topic focusing on Canadian post-secondary students, as they represent an understudied subgroup of young adults despite their unique travel patterns (Taylor & Mitra, 2021). Within this context, we focus on two research questions: 1) How did the travel behaviour of post-secondary students change post-COVID 19 pandemic and are these changes associated with their socio-demographic characteristics? and 2) how do these travel behaviour changes differ among various groups of students with different occupational and spatial contexts?

Methods: This research was carried out in the Greater Toronto and Hamilton Area (GTHA), Canada using longitudinal travel data (n=508) collected in fall 2019 just before pandemic and in spring 2022 when most courses in post-secondary institutions were being delivered on-campus. All participants were post-secondary students in 2019. McNemar-Bowker test was performed to identify significantly different commute mode choices before and after pandemic. Multivariate binomial logistic regressions were carried out to examine the association between socio-demographic characteristics of respondents and their post-pandemic commute mode changes.

In addition to pandemic-induced changes, some other life events, such as starting employment after completion of education or residential relocation, might also have contributed to travel behaviour changes over the course of pandemic. To address this, differences in commute mode changes among four groups of students, with diverse occupational and spatial contexts, were examined using Fisher’s exact test to identify whether these changes are significantly different among those students who started working full time or changed their residential locations over the course of pandemic.

Results: Overall, the use of public transit and active modes declined among students after COVID-19 pandemic while the use of automobiles increased. Most of the students who used automobiles before pandemic continued to do so after pandemic. The commute mode shifts from public transit and active modes to cars were statistically significant after pandemic. Some socio-demographic characteristics such as age, living situation, work hours and the availability of automobiles were significantly associated with these mode changes. Geographically, the increased use of active modes was mainly observed in downtown areas while a mode shift to automobiles was more evident in suburban areas. Different commute patterns were observed between individuals who experienced changes in occupation and residential location between 2019 and 2022, and those who did not. A continued use of transit was observed among those who did not experience these life events, whereas a shift from public transit to automobiles was observed among those who started working full time than those who remained students.

Conclusion: A significant proportion of public transit and active modes users switched to automobiles for commuting after pandemic. Different commute patterns among individuals with diverse occupational and residential contexts suggest some influence of life events on commute mode changes, in addition to pandemic-induced changes. Future transportation policies that are focused on providing accessible and convenient travel options, such as improved public transit system particularly in suburban locations, and safe infrastructure for walking and cycling, may provide a supportive context for young people to shift back to their pre-pandemic sustainable travel habits.

Citations

• ‘intelligent lockdown’ change activities, work and travel behaviour: Evidence from longitudinal data in the Netherlands. Transportation Research Interdisciplinary Perspectives, 6, 100150. https://doi.org/10.1016/j.trip.2020.100150


Key Words: Young adults, Travel habit, Longitudinal analysis, Life events, Transportation mode choice

UNDERSTANDING EMPLOYEES’ RESIDENTIAL CHOICES IN THE NEW NORMAL USING COMMUTE SEATTLE SURVEY
Abstract ID: 1012
Individual Paper

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The outbreak of COVID-19 resulted in the wide adoption of work-from-home and flexible work arrangements, which is commonly referred to as the New Normal. Recent studies suggested that the New Normal has come with significant changes in commuting behaviors and many employees’ residential location preferences (De Haas et al., 2020; Pawar et al., 2020; Pawar et al., 2021; Shakibaei et al., 2021).

However, these studies did not systematically investigate, nor fully explain, the resulting pattern of employees’ residential choices within the metropolitan area. Closing this research gap will be essential for effective planning for urban transportation, housing provision, and post-pandemic economic recovery. This study aims to deepen the understanding of employees’ residential location choices in the New Normal by addressing the following questions: (1) How significant is the intra-metropolitan residential relocation phenomenon in the US during the New Normal and what is its spatial pattern? (2) In what ways are the residential relocation decisions related to employees’ household and occupational characteristics, neighborhood and built environment characteristics, and employer’s workplace policy factors? (3) How do these factors jointly influence employees’ residential choices?

This study uses data from the Seattle 2022 Commute Survey, which collects information on individuals’ sociodemographic characteristics, work arrangements, work and home locations, commute and non-commute travel behaviors, and related considerations. The preliminary results of our data analysis indicate that: (1) about 30% of workers relocated within the metropolitan area – around 11% of employees moved closer to their worksites, and about 20% of the employees moved farther from their worksites; (2) about 20% of employees working in hybrid work arrangements moved farther from their worksites; (3) in contrast, about 17% of essential workers moved closer to their worksites while less than 5% of full-remote workers moved closer to their worksites. For the third research question, we are currently estimating and comparing alternative statistical models, including a multinomial logit model, to identify and assess the contributing factors to residential choices. Our findings, based on empirical data from Seattle, contribute to the literature on employees’ residential choices within the metropolitan area during the New Normal.

Citations

Key Words: Residential relocation, New Normal, Work from home, Multinomial logit model, Urban Planning

PUBLIC-PRIVATE PARTNERSHIPS IN CANADA: TIME TO REASSESS?
Abstract ID: 1021
Individual Paper
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For 20 years, public-private partnerships have been the favoured model for delivering large scale infrastructure such as public transit lines, highways, bridges, hospitals, and courthouses in Canada. To date, over 275 projects with a capital value of over $130 billion have been completed or are being planned through PPPs in the country, making Canada one of the leading users of PPPs globally.

PPPs have always been contentious, fostering vigorous debate about the implications of greater private participation in the design, construction, financing, operations and maintenance of public infrastructure than more traditional procurement options (Whiteside, 2020; Sagalyn, 2008; Murphy, 2008). Planners, in particular, have emphasized concerns about limited transparency, minimized community engagement, and a loss of government control over key civic assets when delivered through PPPs (Siemiatycki, 2009). Despite the debate, since the mid 2000s PPPs have been enshrined in public policy and widely promoted by industry as the best model for delivering large, complex infrastructure. Now the tide is turning. Recently, PPPs have started to fall out of favour in Canada, with governments looking seriously at alternate procurement approaches for the first time in a generation.

What explains the declining popularity of PPPs from their spot as the preferred model for delivering large infrastructure in Canada? This paper explores the shifting political economy, policy and commercial landscapes towards PPPs, and explores the implications for cities and planning. It draws on a review of policy documents and key informant interviews with public and private sector practitioners. It shows how PPPs rose to prominence in Canada on a wave of governments seeking to achieve value for money by transferring risk and tapping into private sector-led innovation. However, PPPs have not started falling out of favour on ideological grounds (Razin et al., 2022), but rather due to recent struggles with high profile PPP projects experiencing cost overruns, delays, poor service quality, a loss of control over community assets, frayed relationships between the partners, and several key industry players exiting the PPP business in Canada altogether.

This paper charts the dramatic rise and questions whether we are seeing the beginning of the decline of PPPs in Canada, while exploring what comes next. Rather than a rejection of PPPs entirely, there is an evolution in the ways that governments and the private sector are partnering to deliver large scale infrastructure in Canada.

Citations

Key Words: Public-Private Partnerships, Infrastructure, Transportation, Project delivery, Public services

PUBLIC TRANSIT ANALYSIS: PITFALLS AND REMEDIES

Abstract ID: 1022
Individual Paper

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Public transit systems provide low-cost mobility and access within their service areas. Because of budgetary and physical limitations, these systems cannot provide equal access everywhere. This realization gives rise to two fundamental concerns in transportation equity research and practice: 1) accessibility poverty and 2) accessibility inequality. Accessibility poverty occurs when people are unable to meet their daily needs and live a dignified, fulfilling life because of a lack of access to public transit. Meanwhile, accessibility inequalities may rise to the level of injustice when some socioeconomic groups are underserved relative to others by public transit.

In this paper, we review two of the most widely used techniques for assessing accessibility inequality and accessibility poverty: Gini coefficients/Lorenz curves and needs-gap/transit desert approaches. We discuss how the underlying assumptions of these methods and their applications found in the transit equity literature and practice embody many previously unacknowledged limitations that severely limit their utility. Further, their theoretical underpinnings do not hold up under close scrutiny. We substantiate these concerns by analyzing the equity impacts of a major Covid-related service cut undertaken in Washington, DC in early 2020. The results show how both Gini coefficients and needs-gap approaches lead to counterintuitive results; they demonstrate that conditions were more equitable after the service cut (using Gini coefficients) and that fewer people lived in areas identified as having subpar transit service (using needs-gaps). But these outcomes are nonsensical--service was objectively worse after the cuts were made. We demonstrate how alternative approaches to measuring inequality and transit needs, namely the Palma ratio and the Foster-Greer-Thorbecke measure, provide more intuitive and actionable findings in line with a priori expectations. We recommend that researchers and practitioners abandon Gini coefficients/Lorenz curves and needs-gaps approaches in favor of alternatives that better reflect both between- and within-group inequality as well as the extent to which public transit is suitable for meeting daily needs.

Citations

A TWO-STEP FLOATING CATCHMENT AREA (2SFCA) METHOD TO EVALUATE ELECTRIC VEHICLE INFRASTRUCTURE ACCESSIBILITY IN LOS ANGELES

Abstract ID: 1028
Individual Paper

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The transport sector in the US has the highest reliance on fossil fuels and is a major contributor to urban and regional air pollution. Transportation accounts for 37% of CO2 emissions in 2021, the largest share among all sectors (IEA, EPA), and was associated with 385,000 PM2.5 and ozone deaths in 2015, resulting in approximately 1 trillion US dollars in health damages globally (Anenberg et al., 2019). Increased electric vehicle (EV) shares in urban mobility facilitate the sector’s transition to renewable energy, benefiting air quality, decarbonization, public health, economic growth, and grid resilience (Malmgren, 2016; Buekers et al., 2014; Skipper et al., 2023). As a result of its policy efforts, California has the largest Zero-emission Vehicle (ZEV) market in the U.S. By the end of 2021, it became the first state to surpass 1 million cumulative EV sales, setting a new yearly record of more than 250,000 EVs sold (California Energy Commission) and doubling the share of ZEV in total vehicle sales (Office of Governor, 2022). However, though California ranked third in public EV charger per-Capita provision in 2020 with 72 chargers per 100,000 people (U.S. Department of Energy, 2021), its infrastructural coverage might not meet its market demand and ZEV transition goals.

An accurate understanding of the supplies and demands of EV infrastructure is crucial to informing sustainable urban planning and development. Although there are growing amount of research analyzing EV policies and infrastructure, there has not been much research that examine the EV infrastructure landscape and accessibility, or pipelines to streamline the analyses of EV and charger distributions. Featuring the City of Los Angeles as a case study, this project proposes a framework that applies the Two-step Floating Catchment Area (2SFCA) method that takes into account EV chargers’ spatial accessibility over 24 hours to analyze the EV charging landscape from supply and demand perspective. This research considers not only the locations of all public EV chargers in the city, but also includes their operation time and average charging time at each location based on data from LA city to construct an accurate supply-demand based EV charger accessibility analysis.

The result found high accessibility index in neighborhoods near the downtown area, decreasing towards the peripheries. Additionally, neighborhoods with the most EV registrations tended to not have access to sufficient charging resources. Consequently, the framework identified potential policy advisories for supplementary infrastructures and shed light on sustainability initiatives like the zero-emission zone pilots.

Citations


Key Words: EV, 2SFCA, EV charging accessibility

ESTIMATING INDUCED TRAVEL FROM ROADWAY EXPANSIONS: EMPIRICAL EVIDENCE AND PRACTICAL TOOLS
Abstract ID: 1052
Individual Paper

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Roadway capacity expansion is often proposed as a solution to traffic congestion and even as a way to reduce greenhouse gas (GHG) emissions. The cited logic is often that increasing roadway capacity increases average vehicle speeds, which improves vehicle fuel efficiency and reduces per-mile emissions of GHGs and local air pollutants. But that logic relies on the flawed assumption that the demand for vehicle travel is inelastic, i.e., that it is unresponsive to changes in cost (including travel time cost). In fact, the demand for vehicle travel does respond to changes in cost. Empirical research demonstrates that as roadway supply increases vehicle miles traveled (VMT) generally does, too. This is the “induced travel” effect—a net increase in VMT across the roadway network due to an increase in roadway capacity, which ultimately erodes any initial increases in travel speeds and causes increased GHG emissions. Despite its importance, the induced travel effect is often not fully accounted for in travel demand models or in the environmental review process for roadway capacity expansion projects (Milam et al., 2017; Metz, 2021; Naess et al., 2012; Volker et al., 2020). This can result in agencies overestimating the benefits of capacity expansions like reduced traffic congestion and underestimating the environmental costs like emissions of GHGs and local air pollutants (Metz, 2021).

With these problems in mind, we developed and launched an online tool that allows users to estimate the additional vehicle travel induced by expanding the capacity of major roadways in California’s urbanized counties (i.e., counties within Census-defined metropolitan statistical areas). The National Center for Sustainable Transportation’s Induced Travel Calculator (Calculator) has generated substantial interest among policymakers and practitioners as a method for estimating induced vehicle miles traveled (VMT), particularly since the California Department of Transportation adopted its 2020 Transportation Analysis Framework in which it included the Calculator as a method to estimate—or at least benchmark—induced VMT. Over 8,000 people have used the Calculator at least once since it was launched in early 2019.

With Calculator use increasing, we initiated a project to update the Calculator and improve its functionality. This paper describes the Calculator (and its offshoots), how it works, and the updates we made to the Calculator’s documentation and functionality, including adding ranges—a rough 95% confidence interval—to the Calculator’s induced VMT estimates (+/-20%). We also discuss the options and limitations for future efforts to validate the Calculator’s induced VMT estimates. In addition, we provide a comprehensive review of the empirical induced travel literature.

The results from our review suggest that the longer-run (3-10 years) induced travel elasticity is close to 1.0 for capacity expansions on major roadways (including freeways, highways, major arterials, and minor arterials), albeit a potentially greater elasticity for expansions of freeway-type facilities than other major roadways. Our review also
indicates that there is not enough empirical evidence to justify using different elasticities based on initial congestion levels, urban versus rural setting, or lane type (for general-purpose lanes, high-occupancy-vehicle lanes, and high-occupancy toll lanes). Going forward, our findings suggest avenues for future induced travel research, including meta-analyses of induced travel studies to estimate pooled effect sizes, more research on the impact of existing traffic congestion and other contextual factors on induced travel effect size, and further studies on induced travel from managed lanes.

Citations


Key Words: Induced travel, Induced demand, Vehicle miles traveled, Environmental impact analysis, Forecasting

CREATING A HAPPY WALKABLE CITY: A HAPPINESS WALKABILITY SCORING SYSTEM BASED ON MICROSCALE FACTORS IN DESIRED WALKABLE AREAS

Abstract ID: 1076
Individual Paper

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Walking has numerous benefits for individuals, communities, health, the economy, and the environment. In recent years, many studies have focused on sidewalks and ways to encourage people to walk. However, less attention has been paid to the attractiveness and walk appeal of the walking area. The goal of this research is to establish a methodology that can serve as the basis for a walkability score system that takes happiness of the residents into account. The specific objectives include identifying the most important factors (activities and facilities) for selecting a place to walk, developing a scoring system to measure the walkability of a desired area, and testing the reliability and validity of the developed scoring system.

To design the happiness walkability scoring system, the project proposes to execute two surveys with residents and experts. In the first questionnaire, residents worldwide are asked about their walkability experience in their hometown, indicating the most valuable walking area, describing this area, and providing some pictures of it. This part helps to collect required and joyful activities and facilities, such as singing, playing instruments, jogging, benches, toilets, lights, fountains, etc. Additionally, the residents are asked to rate them based on the Liker scale 1-5 categories. The third part collects the condition of each factor for a selected walking area. The second questionnaire was developed for experts. They are asked to weigh the factors extracted from the residents responding to the first questionnaire. The goal is to have 200 participants for the residents’ questionnaire and ten participants for the experts’ questionnaire.
The data analysis includes classifying the cities collected in the first questionnaire based on different criteria, such as the size of the city and the population. The extracted factors are weighted in three different ways, and the results are compared. First, the extracted factors from the first questionnaire are weighted and averaged based on all responses received by the residents. The weighting of the extracted factors is tested using internal consistency evaluating the reliability in the form of a Cronbach’s alpha ($\alpha$). The Cronbach’s alpha ($\alpha$) enables the elimination of outliers in the list of factors, based on the rational choice. The result of this stage is the selection of factors to consider in the next stages of the analysis. Second, the experts get a list of factors that are updated from the first questionnaire given to the residents, including factors previously not considered. The Analytic Hierarchy Process (AHP) model uses a matrix form and lists the factors as columns and rows. It requests the experts to compare the importance of the two factors and based on these results, the factors are weighted again. Regression models are used to study the relationship between dependent and independent variables. These calculations enable the selection of the most important factors and their weights that will be included in the happy walkability score calculation.

The research’s result is an improved walkability scoring system in terms of walk appeal based on residents and expert scoring of the selected walkability infrastructure. This system aims to have a broad impact for various stakeholders in a community, including health and well-being, environmental impact, social equity, economic development, and quality of life. A happiness walkability scoring system will provide a quantifiable measure of walkability in a city in terms of happiness, helping public officials and urban planners understand the strengths and weaknesses of a specific area in terms of walkability.

Citations


Key Words: Happiness walkability scoring system, Walk appeal, Analytic hierarchy process model

BIKING NEAR MISSES AND THE ROLE OF INFRASTRUCTURE: A CITY-WIDE ANALYSIS USING GPS-BASED CROWDSOURCED REPORTS
Abstract ID: 1079
Individual Paper

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Many cities in the U.S. are making efforts to create a more accommodating environment for biking to promote sustainable, livable, and healthy urban areas. Addressing biking safety is an important step towards promoting behavioral change in mode choice and achieving this goal. While studies on the relationship between bike infrastructure and perceived safety generally agree on its positive impact, it can vary depending on factors such as the design of the bike lane and the volume/speed of motor vehicle traffic.
Empirical evidence on the actual risk of biking is mixed. Two issues make conducting those studies difficult and their results equivocal. The first issue is the difficulty of collecting data on bike traffic volume. Failing to consider bike traffic volume can lead to an argument that installing bike lanes causes more crashes (Jensen, 2008; Forester, 2012; Chang, 2019). A few studies have manually counted bicyclists based on either field studies or video recordings (Hunter & Stewart, 1999; Minikel, 2012). However, the manual counting approach has limitations in securing the generalizability of the research due to temporal/spatial constraints. The other issue is that bike crashes are rare, making it difficult to achieve sufficient variation in the number of incidents across different street environments, and thus, making it unfeasible to make statistical inferences.

To overcome these limitations, this study employs an app-based crowdsourced bike incident report dataset called SimRa. The dataset provides information on non-injury near-crashes during a bike trip – such as close pass, near left/right hook, and near dooring; this study refers to those events collectively as ‘near miss’. Near misses can be a better indicator of biking safety than crashes because 1) they are a more common risk experienced in daily lives compared to incidents that involve serious injury, and 2) represent both subjective and objective safety. Near misses are a type of incident that is not reported in most cases; thus, crowdsourcing is essential. The crowdsourced dataset contains not only the location of near-miss incidents but also GPS traces of bike trips of the app users, from which researchers can process bike traffic volume at individual road segments.

This study examines how the street environment, including bike infrastructure, affects near-miss experiences in Berlin, Germany, where the data was collected. For the analysis, we combined locations of near misses and GPS traces into the OpenStreetMap network, which was used as the data source of street environments. Our preliminary analysis results show that bike infrastructure, street hierarchy, and the presence of street parking are clearly correlated with the risk of near misses. By identifying which types of bike infrastructure and street design elements are associated with a higher risk of near misses in subsequent analyses, this study will provide insights that can inform the design of safer bike networks and guide targeted investments in bike infrastructure.

Citations


Key Words: Biking safety, Bike near miss, Bike infrastructure, Bike incident report, Dooring

SHORTEST PATH OR HEALTHIEST PATH? MEASURING EXPOSURE TO TRAFFIC-RELATED AIR POLLUTION FOR BIKE-SHARING USERS IN BOSTON

Abstract ID: 1089

Individual Paper

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Bikeshare systems (BSS) in the US have widely grown in popularity in the past fifteen years (NACTO, 2020). By 2019, US cities and towns operated more than eighty-six BSS, with more than 40 million bike trips generated by
station-based BSS users. Studies show that bikeshare systems in the US have provided health benefits for cyclists (Clockston & Rojas-Rueda, 2021), reduced greenhouse gas emissions, mitigated traffic congestion, and served as an affordable mobility alternative that improves access to destinations and opportunities (Tyndall, 2020).

While navigating in the urban road systems, cyclists' route choices can be influenced by various factors, such as travel time, built and natural environment, safety, availability of bike facilities, and the potential of exposure to traffic-related air pollution (TRAP) due to their proximity to motor vehicles and urban roads. Researchers found that different bike routes may significantly impact cyclists' exposure to TRAP (Hatzopoulou et al. 2012, MacNaughton et al., 2014).

In this study, in order to identify routes with less exposure to TRAP for BSS users in Boston, we analyzed trips in the Blue Bike (fixed station) BSS and GPS trajectories of the Lime (dockless) BSS in the Boston Metropolitan Area. We employed the high spatial resolution C-LINE traffic-related air pollution data (Barzyk et al., 2015) at the 10-meter by 10-meter grid level to quantify the air pollution exposure among BSS users in Boston. By including air pollution exposure as the edge cost and routing the k-shortest paths for origin and destination trips by the Blue bike users, we generated the least polluted bike routes and compared them with the shorted paths that only considered travel time savings. We also compared the derived "healthier" bike routes with the revealed GPS trajectories by the Lime BSS. By evaluating the bicycle network and facility, and the routes with less exposure to TRAP, we propose improvements for the bicycle network planning for the Boston Metropolitan Area. This research demonstrates an analytical framework for planners to identify healthier routes for cyclists, providing a route-ranking method for bicycle network improvement.

Citations

- Piers MacNaughton, Steven Melly, Jose Vallarino, Gary Adamkiewicz, John D Spengler. 2014. “Impact of bicycle route type on exposure to traffic-related air pollution”. Sci Total Environ (490): 37-43.

Key Words: Bike-sharing systems, Traffic-Related Air pollution (TRAP), Bike route planning

HUMAN TRAFFICKING POLICY AND THE DEPUTIZATION OF THE TRANSPORTATION SECTOR FOR CRIME CONTROL: IMPLICATIONS FOR TRANSPORTATION JUSTICE

Abstract ID: 1103

Individual Paper

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Human trafficking is a federal crime and a criminal offense in every state. Since public policy initiatives began enlisting transportation agencies and businesses in anti-trafficking efforts over the last several years, the topic has
occupied a growing presence within the transportation sector (Advisory Committee on Human Trafficking, 2019). Transportation-related anti-trafficking policies include commissioning transportation facilities to be the platform for public awareness campaigns and dictating new standards for institutional conduct, such as mandatory workforce training on recognizing and reporting suspected cases. However, critical research on the nexus between transportation and human trafficking policy is lacking. How and why do federal and state laws compel transportation agencies and planners to devote attention to human trafficking while planning and operating transportation facilities and services? Do the objectives, practices, and outcomes of anti-trafficking policy align with the primary mission of transportation agencies and operators to provide equitable opportunities for safe movement?

Hundreds of codified references to human trafficking exist across federal and state policy in the United States (“Criminal Offenses: Human Trafficking,” 2021; The National Action Plan to Combat Human Trafficking, 2021). We aim to provide a systematic overview of relevant policies and their connections to, and implications for, transportation. First, we outline the international and federal legal frameworks that set precedents for state anti-trafficking policy and the federal initiatives specifically coordinated by the U.S. Department of Transportation. Next, we consider state legal codes in a purposive sample of eight states (California, Florida, Georgia, Illinois, New York, Ohio, Texas, and Wisconsin) selected for their elaborate anti-trafficking policy regimes and their geographically and socio-politically diverse range of transportation and trafficking contexts, including border states and transit-rich states. Scrupulous review of references to human trafficking in each state’s legal code allows us to develop a working inventory of the legal connections drawn by legislators to the transportation sector. For instance, we document how states define trafficking and the intended targets of required trainings and awareness efforts. Our discussion situates these findings within the broader historical and socio-political context of anti-trafficking policy and the attendant literature, particularly with respect to the broader crime control apparatus.

This research provides a basis for critically evaluating whether anti-trafficking belongs on the transportation policy agenda. Anchoring our discussion in Michael Lipsky’s (1983) notion of ‘street-level bureaucracy’ and Elijah Anderson’s (2012) ‘cosmopolitan canopies’, this paper explores the ‘dilemmas of the individual’ in the administration of such policies. Bringing these theories into conversation with the scholarship on the racial, sexual, and ethnic politics of anti-trafficking suggests the potential for encouraging racialized surveillance by deputizing transportation workers in anti-trafficking campaigns. Our work provides fresh insight into the implications of transportation-related anti-trafficking policy for transportation justice, travel behavior, and public safety.

Citations


Key Words: Human trafficking, Transportation justice, Policy research, Racialized surveillance

SHARED MICROMOBILITY AND THE BUILT ENVIRONMENT: CONDUCTING A SYSTEMATIC REVIEW WITH META-ANALYSIS
Abstract ID: 1115
Shared micromobility has been gaining popularity as a means of emerging personal transportation across the US cities. In 2019, 136 million trips of shared micromobility were generated throughout the US, which is 60% more than the trips generated in 2018. The advanced GPS technology and smartphone applications in shared mobility bring together on-demand mobility services and enable users to find and drop off micromobility at their convenience. Despite the growing popularity and convenience, no study has systematically summarized and statistically combined the quantitative literature on the relationship between shared micromobility usage and built environment factors. Even though several studies have attempted to investigate this relationship using empirical data of a case region, little work on this topic has generalized across studies and regions or helped make sense of differing results. Furthermore, studies on e-scooters as a dockless service remain unexplored in the current literature. Without this, readers have glimpses of many trees rather than a panoramic view of this complex and rich forest of research. Given that the dramatic increase in free-floating bikesharing can lead to trade-offs against station-based bikesharing, the rapid growth in micromobility gave city planners and transportation engineers little time to identify their different travel behaviors depending on station type. Due to the confusion driven by the rapid influx of these platforms, it has become increasingly apparent that comprehensive research is necessary to evaluate these effects of services on our cities.

This study aims to estimate the average effectiveness of shared micromobility ridership from selected studies and identify built environment factors affecting relative differences in the shared micromobility ridership outcomes. This study examined the following research questions: what are the built environment factors affecting the shared micromobility ridership? Moreover, what are the average effectiveness of those built environment factors affecting relative differences in the shared micromobility ridership?

To address the research questions above, this study conducts meta-analysis and meta-regression modelling. Through the Preferred Reporting Items for Systematic review and Meta-analysis (PRISMA) process, a total of 550 journal articles were found at the initial search--170 from the Web of Science, 17 from SCOPUS, 105 from ProQuest, and 99 from EBSCOhost. The Mendeley reference manager retained the 306 articles after screening duplicates. In addition, we included eight studies through the snowball search using the additional manual searching process. We conducted the screening processes first by reading the title and abstract of each article and excluded 201 articles bringing in 113 articles. Then we assessed for eligibility through first including quantitative synthesis (n=91) and then excluded 40 articles based on the predefined inclusion and exclusion criteria (n=51). After that, we excluded 21 articles that did not include sample size, mean, standard deviation, and coefficient values used to calculate the effect size elasticity. Finally, 30 final samples of studies were included in the present review. After implementing mixed-effect meta-analysis and meta-regression models, this study found several factors affecting variation across results of previous studies--such as distance to central business district, sociodemographic characteristics (e.g., age and race), bike station characteristics (the number of docks and bike racks, bike lane density and length), and so on. Characteristics of publications are examined to account for publication bias and impacts of model-design characteristics on bike share riderships. The findings of this study provide unique opportunities to examine the sensitivity of modeling results in previous studies on bike share ridership and additional insights into interactions between the built environment characteristics and dissemination of micromobility as a part of active transportation planning and policy development.

Citations


Key Words: bike share, built environment, micromobility, systematic review, meta-analysis

LIFE CYCLE ASSESSMENT OF HEAVY-DUTY TRUCKS: AN ENVIRONMENTAL IMPACT STUDY COMPARING ALTERNATIVE FUELS FOR GOODS MOVEMENTS

Abstract ID: 1116
Individual Paper

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Heavy-duty truck freight transportation contributes to global greenhouse gases (GHG) and climate change. Unsurprisingly, trucks are a leading contributor to particulate matter (PM) and overall pollution burden for California communities, especially those near major transportation corridors. (CalEnviroScreen 4.0 | OEHHA, n.d.) California has enacted technology-forcing legislation to address local and global problems to replace fossil fuel trucks with zero and near-zero-emission vehicles within the next few decades. (Advanced Clean Truck and Advanced Clean Fleet Rules with California Air Resources Board, 2020) Although tailpipe emissions from internal combustion engines significantly contribute to pollution, other stages also contribute to climate change. Every step must be scrutinized to understand the impact. A systematic life cycle assessment (LCA) approach determines which short-haul truck powertrain technologies can lower GHGs and other health-related emissions.

The research analyzes energy usage and emissions for class-8 diesel, compressed natural gas (CNG), electric (EV), and hydrogen fuel-cell (FCV) trucks for all life cycle phases. Cradle-to-grave stages include raw mineral extraction, material production, component manufacturing, vehicle assembly, fuel production, distribution, use, end-of-life disposal, and recycling. Sensitivity analysis incorporates spatial elements, periods, and alternative hydrogen production methods. A quantitative LCA of each truck type uses Argonne National Laboratory’s Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) and Greenhouse Gases, Regulated Emissions, and Energy use in Technologies (GREET) tools. (Wang et al., 2020) A fleet operator survey provides operational parameters for the model. A literature review revealed that many studies lack one or more stages due to data limitations. Since OEM data is unavailable, a scalable life cycle inventory method estimates the unique drivetrain components for EV and FCV trucks. (Wolff et al., 2020) LCA tool results provided inputs for an overall ranking of powertrains by normalizing all environmental influences discovered. (Crenna et al., 2019)

As expected, truck comparisons indicate that EVs are better for the environment than diesel vehicles on cleaner grids. However, the method of hydrogen production is vital to reducing the overall global warming potential of FCV trucks. Green hydrogen produced with solar cells reduces the global warming potential of FCVs more than similar heavy-duty diesel, CNG, or EV trucks. In contrast, an FCV using fuel made by steam methane reforming process produces more lifetime carbon dioxide equivalents (CO2e) than a diesel version. The same truck using hydrogen from electrolysis expels one and a half times the global warming potential compared to diesel.

This study highlights the importance of the fuel cycle. From a policy perspective, the push to implement zero-emission trucks must take a backseat to building the required electric and hydrogen production infrastructure powered by renewables. Unless fossil fuels are cut from power production, benefits will be minimized and, in some
cases, raise carbon output.

Citations


Key Words: freight, trucks, emissions, environment, hydrogen

BUS STOP AMENITY POLICIES: EVIDENCE FROM THE USA

Abstract ID: 1124
Individual Paper

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Local bus stops are one of the most widespread, numerous, and visible elements of transit systems. They also function as a critical infrastructure that acts as the physical nexus connecting most riders to transit in the United States. Yet, bus stops are typically one of the least high-quality elements of transit. More often than not bus stops are little more than a curbside sign on a pole. This discrepancy between the prevalence and importance of local bus stops and the quality of their physical design deserves increased attention. This is particularly true for bus stop amenities. Amenities encompass features that enhance the user experience, such as benches, shelters, and electronic displays. The limited existing research on the topic suggests that bus stop amenities can influence transit ridership (i.e. Brown et al., 2006), rider satisfaction (i.e. Roy & Basu, 2020), and equity (i.e. Moran, 2022). But as Moran has argued, within the vast transit literature “the paucity of research on stop amenities stands out” (Moran, 2022, p. 2).

This research seeks to fill gaps in knowledge about bus stop amenities policies, as little research has investigated this issue. Research in the late 1990s on bus stop design policies (not amenities specifically) found that less than half of transit agencies had written guidelines or manuals for the design of their bus stops at all (Fitzpatrick et al., 1997). Shortly after, Law and Taylor investigated the policies of bus stop shelter placement (a key stop amenity) in Los Angeles, describing a scoring system with “vague requirements” involving boardings, land use and political considerations, and costs and advertising revenue (2001, p. 80). This research seeks to update and expand our knowledge of bus stop amenities policy by answering this fundamental question: What are contemporary transit agency policies for providing bus stop amenities?

This research examines a sample of 38 publicly available transit agency bus stop amenities policies, representing a diverse mix of transit agencies by size and geography. Almost all of the policies in the sample use boardings as the key criterion for placing bus stop amenities. Over three-quarters of those prioritizing boardings give numeric
thresholds for stops to qualify for specific amenities. However, there is remarkably little consistency for thresholds among the different policies and no explanation for how they are set. As well, nearly all of those using boardings as a key criterion augment it with additional criteria to determine amenities placement. Among these additional criteria, transfers, special populations, and equity are the most common. But, more generally, there was a wide array of additional criteria used in the policies with little to no explanation for why they were chosen or how to interpret them. In addition, all agencies gave themselves the option to ignore their policies while the meta issues of jurisdiction, right of way (ROW), and costs complicated the already complex policies. The overall picture is of a landscape of policies that are not evidence based, highly complex and difficult to interpret, and that offer little predictability for amenities provision. These findings point to the need for more research on optimal bus stop amenities provision, more guidance from organizations like NACTO and APTA, and more attention in planning and urban design to reserve ROW for bus stops. As well, it reinforces the need to tackle the long-standing weakness for U.S. transit agencies around funding and jurisdiction.

Citations


Key Words: transit, Infrastructure, bus, policy

INTEREST IN CAR-FREE LIVING IN THE UNITED STATES: SURPRISINGLY STRONG FINDINGS FROM A NATIONWIDE SURVEY
Abstract ID: 1138
Individual Paper

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The United States is a famously car dependent nation, with only a small fraction of US households living car free. In the US, cars provide access well beyond any other form of transportation. However, this convenient mobility option comes with a cost. In the urban environment, cars generate safety hazards, contribute to air pollution, accelerate climate change through emissions, create traffic congestion, and take up copious amounts of space. In addition, the lack of infrastructure for non-car transport options contributes to transportation equity gaps. In the US, there are many people who are car-less, meaning they don’t choose to live without a car, but simply do not have access to one due to cost barriers, health or age-related limitations, or lack of access to licensing.

Some private developers have recently taken the initiative to create car-free communities in otherwise car
dependent cities, and enthusiasm for these developments has been promising. However, nationwide interest in car-free living has yet to be directly measured.

We surveyed a representative sample (n=2,155) of the adult urban and suburban population in the United States to answer two main research questions: 1) How large is the demand for car-free living in the United States?; 2) Which factors determine who is currently living car free in the US, and who is interested in car free living? We used descriptive statistics, as well as a series of multivariate statistical models, to explore these two research questions.

Of our respondents that are not already living car-free (n=1,891), 19% said they are interested in living car-free, while another 41% said that they would maybe be interested in car-free living one day. Our statistical analysis shows that interest in car-free living was largely dependent on how often the respondent drives now, as well as if they had experiences living car-free in the past. This finding is consistent with prior research showing that past car ownership experience influences car ownership choices. Interest in car-free living among car owners was not correlated with income, age, or race. Being employed and commuting by car had a negative influence on car-free interest, as did having children. Lastly, we found that those living without a car now differ demographically from car owners who express interest in car-free living - especially with regard to income.

Even though only 10% of households living in US metropolitan areas are currently living without a car, survey results suggest that more than half of the remaining car-owning households are interested in adopting this lifestyle. Even if only a fraction of those who claim interest in car-free living would follow through and dispense of their vehicles, these data indicate that demand for car-free living is surprisingly strong. Our analysis suggests that introducing US residents to car-free infrastructure and providing opportunities to use other forms of transportation may increase interest in car-free living. Due to the diversity of those interested in car-free living, and the positive influence of exposure to car-free living and car-free infrastructure on interest, planners should continue to design in accordance with the demand for a car independent living nationwide.

Citations


Key Words: Car-free living, car dependence, car ownership

**ELECTRIC VEHICLES FOR ALL? KEY OPPORTUNITIES AND CHALLENGES FOR MASS MARKET EV ADOPTION IN THE SOUTHWESTERN US**

Abstract ID: 1139

Individual Paper

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Transportation electrification is critical for reducing our reliance on petroleum and our contribution to climate change. Thus far, electric vehicles (EVs) have been attractive mainly to high-income households, in large part...
because most electric vehicles are new, and new cars are expensive. To meet national electrification goals, the electric vehicle market must expand to include low- and moderate-income households. Less is known, however, about demand for electric vehicles among non-high-income buyers. This study contributes to the EV adoption and transportation equity literature with findings about prospective mass EV adoption based on survey responses from a representative sample of nearly 2,500 adults in the U.S. Southwest. The research questions that motivate this work are:

(1) How, if at all, does household income influence interest in EV adoption? and
(2) Beyond income, what factors are most important in determining household interest in adopting an electric vehicle?

Here, we use attitudinal factor analysis, a multinomial logit model, and descriptive statistics to report three key findings. First, interest in adopting an electric vehicle is not substantially correlated with income. Households in the highest income group are twice as likely as those in the lower two income groups to be planning to purchase an EV as their next vehicle. Still, this only represents 10 percent of higher-income households. There is not a strong income-related pattern among households that would consider purchasing an EV for their next vehicle. Second, approximately 30% of adults in each of three income categories reported that they would never buy an electric vehicle. There is no difference between income groups in the percent of households that will "never purchase and EV". Finally, access to home charging is a critical determinant of interest in electric vehicle adoption. People who have or could easily have charging access at home were much more likely to say they might be or definitely are interested in owning an EV. EV adoption may be strongly limited by the availability or potential availability of home charging. These findings suggest that policies to improve access to home charging opportunities should be central to efforts to address equity in mass adoption of EVs.

Citations


Key Words: electric vehicle, low income, charger, charging, adoption

DEVELOPING A FRAMEWORK FOR MEASURING URBAN BIKE QUALITY FOR EQUITY ASSESSMENT

Abstract ID: 1150

Individual Paper

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Bicycling has long been viewed as a mode of transportation reserved for predominantly white, middle-class individuals and was not considered a serious solution to the transportation needs of the nation (Golub et al., 2016). This resulted in a failure to include it in the broader framework of transportation justice (Lugo, 2015). However, there has been a recent shift in recognition of the importance of bicycle equity as a crucial aspect of transportation justice. The rise in popularity of cycling as a means of transportation and the increased allocation of funding towards bicycle infrastructure has made it imperative to ensure that these benefits are distributed equitably for creating inclusive and sustainable communities. The federal government has made a push toward supporting bicycle infrastructure investment. The USDOT Secretaries Ray LaHood and Anthony Foxx emphasized the importance of creating walking and biking networks in livable communities and increased funding for bicycle projects through a safety initiative (Kent and Karner 2019). Additionally, in 2022 a $1 billion pilot program was launched to reconnect racially divided cities through rapid bus transit, bike lanes, and pedestrian walkways (The Associated Press 2022).

With the growing support for bicycle infrastructure investment, cities need to make strategic investments in their bike systems and plan for equitable distribution of facilities. To do so, accurate assessments must be made to avoid any overestimation. On the other hand, American cities are working on expanding their bike infrastructure, and thus planners and decision-makers must ensure that the benefits and burdens of transportation investments are equitably distributed across potential users (Kent and Karner 2019). Proper understanding and addressing equity impacts requires careful attention to data and methods (Martens, 2012).

Several studies have analyzed the accessibility, bikeability, and equity of bicycle networks. To measure accessibility, some studies used the same methods as motorized accessibility like gravity-based, and utility-based measures, whereas the other studies believe that non-motorized travel choices are not only dependent on time and distance but also on land use and other factors like connectedness, comfort, and availability of direct routes. So, the later studies use the Level of Traffic Stress (LTS) methodology which formalizes the classification of streets based on their comfort for bicyclists while highlighting the connectivity potential of continuous low-stress networks (Mekuria et al., 2012). However, there is a lack of comprehensive methods that combine these efforts to answer the question of what is the most effective measurement of bike facilities that consider equity concerns such as bike access for those who ride out of necessity rather than choice?

This research aims to bridge this gap by developing and testing a framework that utilizes a comprehensive bike network dataset and statistical and geographic analyses. The study area includes regions with existing bike lane systems in the San Francisco Bay Area, Northern San Joaquin Valley, Los Angeles County, and Orange County. The methodology involves calculating a bike infrastructure availability score that considers the differences in safety and comfort between bike path classes and combining it with the bike accessibility score to important destinations. The final score is then used to evaluate the relationship between the distribution of bike infrastructure and spatial disparities in census block groups, using statistical modeling.

An accurate measure of bike infrastructure can support equity in developing quality bike networks and improving bike ability across U.S. cities. By addressing disparities in bike infrastructure, cities can make strategic investments that benefit all residents. This study will provide valuable insights into the distribution of bike infrastructure and its impact on different communities and will help in making data-driven decisions for the development of inclusive bike networks in the future.

Citations

KEY WORDS: Bike Infrastructure, Equity, Accessibility, Spatial Analysis

THE MULTIDIMENSIONAL BURDEN OF COMMUTING
Abstract ID: 1152
Individual Paper

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This study examines another aspect of the commute: time of departure. Over two-thirds of the commuters in the Los Angeles Metropolitan Area leave for work between 6 and 10AM, but another million individuals leave between dusk and dawn (between 5PM and 6AM). These more unconventional hours of departure may reflect work schedules by employment type (i.e., industry and occupation) (Gerstel & Clawson, 2018); workers’ attempts to overcome long commute distances and “solve” the impossible puzzle of matching employment and affordable housing (Kain, 1968); or the long commute times on public transit, which require early departure times (Johnston-Anumonwo, 1995). This paper seeks to examine the factors associated with off-peak commute times, which has implications for job access, residential location, and public transit services for low-wage workers, particularly as ridership continues to decline in the LA metro area, while private vehicle use is increasingly costly for individuals and the environment.

In this study, I identify the factors associated with peak or off-peak departure times, especially those that relate to occupational segmentation, residential segregation, and the gendered division of household labor. I expect women with children to have peak-hour departures as primary caregivers -- which can narrow the scope of where and what type of jobs they seek, as well as mode of transportation (Hanson & Pratt, 1995). Off-peak commute times may reflect workers’ attempts to overcome spatial mismatch or their occupationally segmented work schedules -- both of which have implications for mode choice and transportation planning, especially among women of color (Johnston-Anumonwo, 1995; McLafferty & Preston, 1991). Using individual-level public use microdata, I employ logistic regression models to estimate the likelihood of a rush hour commute given individual and household characteristics. I focus my analyses on the LA Metro Area, a demographically and economically diverse region, which allows for inferences to many other metropolitan areas that are also growing in similar ways -- like the sunbelt region.

I then explore the relationship between time of departure and commute time, or whether before rush hour commuters are also more likely to have longer commutes -- a double burden. Initial analyses of individual-level public use microdata of the Los Angeles Metropolitan Area show that mean commute times are in fact longest between 1-2AM and 8-9PM -- almost 10 minutes longer than during the rush hours of 8-9AM when we observe the highest levels of traffic congestion and public transit use. At the same time, workers who commute during these non-traditional hours earn less than rush-hour-commuters and are mostly employed in low-wage industries and occupations, including transportation/warehousing/utilities, retail, sales, and office and administrative support.

Citations


Key Words: Commuting, Labor Markets, Public Transportation, Urban Inequality, Spatial Mismatch

TURNING THE WHEEL ON CYCLING AND PEDESTRIAN FACILITIES - EXPLORING SHIFTS IN TRANSPORTATION PROCESSES IN THE TORONTO, VANCOUVER, AND MONTREAL REGIONS, CANADA

Abstract ID: 1168
Individual Paper

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Central Theme: The COVID-19 pandemic warranted extreme public health measures including masking, physical distancing, and periods of “lockdown” in many countries across the Western world. These drastic restrictions on individuals’ daily lives may have disrupted society’s neoliberal ideals of individualism, autonomy, and freedom. At the same time, this disruption presented an opportunity to re-think how urban policy and planning can address public needs. Particularly in the urban transportation sector, the promotion of automobility has long dominated policymaking, protected by combative political will (Walks, 2015; Wilson & Mitra, 2020). The pandemic represented an opportunity to re-allocate some road space to allow physically distanced outdoor recreation and transportation options, such as walking and bicycling. While an emerging literature focuses on the equity dimensions of these transportation planning initiatives and their impacts on the uptake of cycling, walking, and improved health outcomes (Fischer & Winters, 2021; Kraus & Koch, 2021), little research has addressed the decision-making process behind such changes.

Method: We used the critical junctures theory as a conceptual framework (Mahoney, 2000) to understand how major changes to active transportation planning were possible at the beginning of the COVID-19 pandemic. We explored the opportunities that may have emerged (permissive conditions) and the factors that may have influenced decision-making (productive conditions). We interviewed 22 municipal employees directly involved in the pandemic-time active transportation developments in three largest urban regions in Canada: the Greater Toronto and Hamilton Area (Ontario), Metro Montréal region (Quebec), and Metro Vancouver area (British Columbia). We conducted a thematic analysis of our interview findings to reveal key dynamics related to the planning of bicycle and pedestrian infrastructure.

Results: With respect to the permissive conditions, all participants highlighted the power of a crisis, such as COVID-19, to disrupt the status quo and accelerate the rollout of active transportation facilities. In many cases, city councilors became more aware of the little space available for walking and cycling and were supportive of installing new facilities. Combined with the increased popularity of walking and cycling, less traffic during the pandemic was also frequently cited as a key enabler. Interview participants also noted their city’s felt need to
compete with other municipalities in promoting and implementing progressive policy measures.

To produce the reallocated spaces, interviewees highlighted several important factors. Commonly, our interviewees explained that city councils went against precedent to delegate new authority to their transportation departments, enabling them to design and implement new infrastructure in record times. Across all three regions, most interviewees discussed their use of temporary materials, such as construction barrels, paint, and signage, given that they could be quickly and easily installed. Most participants also highlighted the limited public consultation requirement during the pandemic as a key factor behind how the facilities were rolled out so quickly. Further, they admitted that in doing so, community backlash in certain locations was quite strong. On the other hand, many participants also discussed the unexpected support for the new street reallocation initiatives.

Some participants also highlighted their city’s pre-existing transportation master plans as a key to success, allowing them to capitalize on already identified locations of need. Others pointed to the alignment between new street reallocations and their climate action plans. On the other hand, some municipalities took advantage of the local knowledge of staff in each borough to implement the most suitable reallocations.

Conclusion: These findings offer novel contributions to our understanding of how in the face of a disruption, major shifts in active transportation policymaking approaches were achieved and present an opportunity to learn from the COVID-19 pandemic as a critical juncture to extend their impact in the long-term.

Citations


Key Words: COVID-19 pandemic, Active transportation, Street reallocations, Political opportunities, Critical junctures

STREAMLINING THE PERMITTING PROCESS FOR TRANSIT-ORIENTED DEVELOPMENT: THE CASE OF CALIFORNIA’S SENATE BILL 375

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California Senate Bill (SB) 375 (2008) aims to reduce transportation sector greenhouse gas (GHG) emissions by linking transportation and land use planning at the regional level. Most prominently, the statute requires California’s 18 metropolitan planning organizations (MPOs) to develop sustainable communities strategies every four years to meet GHG emissions targets set by the state’s Air Resources Board. SB 375 also attempts to more directly incentivize transit-oriented development (TOD) by either exempting qualifying transit-adjacent and residential-focused projects from the project-level environmental review normally required by the California...
Environmental Quality Act (CEQA) or reducing the scope of that review (collectively, SB 375 streamlining). In theory, SB 375 could reduce the monetary and time costs of the development approval process for qualifying projects, as well as reduce exposure to CEQA lawsuits. But it is unclear how much it has helped. SB 375 streamlining and other CEQA streamlining provisions for TOD projects (and infill developments generally) are often “criticized for layering on so many project level restrictions that no developments succeed in meeting all the eligibility requirements” (Reid et al., 2017, 266). However, there is limited empirical research on how frequently the provisions have actually been used or how successful they have been at streamlining the entitlement process for TOD projects.

In this study, we investigate the extent to which SB 375 streamlining has been used across the state, the reasons local governments and project developers have either used streamlining or elected to forego it, the degree to which SB 375 streamlining actually helps reduce the time, cost, and uncertainty of permitting TOD projects, and how it could be improved to better meet those goals. To answer these questions, we first determined which California cities have eligible transit priority areas (TPA’s) via the California Office of Planning and Research’s parcel-level SiteCheck tool. We then catalogued development projects that have utilized SB 375 streamlining by scouring online databases and via phone and email outreach to city and county planning and MPO offices. We are now in the process of conducting stakeholder interviews with developers, city and county planners, and MPO officials to uncover themes of implementation in a variety of contexts.

Our preliminary findings suggest that SB 375 streamlining has been used sparingly and only in a select few jurisdictions. Relatedly, there appear to be sizeable knowledge gaps about how to utilize SB 375 streamlining. We will further investigate the sparse use of SB 375 streamlining through our stakeholder interviews, which are in process, and analysis of sociodemographic data (comparing Census tracts where SB 375 streamlining has been used versus those where it has not). We will also examine the efficacy of the streamlining and develop recommendations for making TOD project streamlining more efficacious.

Citations


Key Words: Housing, Transit-oriented development, Streamlining, Environmental impact review

THE TRIP CHARACTERISTICS OF A PILOT AUTONOMOUS VEHICLE RIDER PROGRAM: REVEALING LATE NIGHT SERVICE NEEDS AND DESIRED INCREASES IN SERVICE QUALITY, RELIABILITY AND SAFETY

Abstract ID: 1173
Individual Paper
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A substantial and growing body of literature has provided educated guesses and transportation demand modeling about how riders might behave in autonomous vehicles (AVs). No studies to-date have explored how riders behave when given access to rides in these new modes of transportation, and how AVs can help address lingering transportation challenges in the city, such as transit deserts, congestion, and increased sustainable modes of transport. This paper evaluates a first-of-its-kind program, offering passengers autonomous rides in Cruise vehicles between the hours of 11:00pm-5:00am when transit services are less prevalent. Results indicate that more than 76% of reported travel by AV riders was mode substitution, largely diverting from rideshare and transit. Over 55% of trips replaced rideshare travel—most of these trips were for social/recreational and shopping/errands. These results suggest that most AV trips may not create induced or latent demand but rather provide an opportunity to address network gaps and last mile connectivity. The results hold additional promise as the importance and popularity of new shared vehicle solutions emerge in the marketplace.

Citations


Key Words: Autonomous Vehicles, Travel Behavior, Rider Preferences, Business Models, Latent Demand

TRANSIT AS A DRIVING FORCE OF CHANGE: EXPLORING THE LIVED EXPERIENCES OF LOW-INCOME INDIVIDUALS FACING TRANSIT-INDUCED GENTRIFICATION

Abstract ID: 1188

Individual Paper

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Rapid transit is experiencing a renaissance, as mid-sized cities across North America are integrating transit oriented policy into economic development plans. Politicians and planners alike have positioned transit policy as central to attracting investment and densifying communities along proposed lines (Doucet, 2021), which has led to the prioritization of accessible neighbourhoods in downtown cores. Alongside rapid transit, active transportation and amenity focused living have contributed to the development of a ‘hip urban culture’ which is further attracting a new wave of young professionals and empty nesters into these areas (Parker et al., 2023). Unsurprisingly, the success of this approach has led to the evolution of research exploring transit-induced gentrification in cities with newly established rapid transit projects (Ley & Jones, 2016). Amongst this literature is a growing call for the integration of lived experience data that can provide a comprehensive understanding of the impact that these projects are having on marginalized groups in areas affected by new transit (Loukaitou-Sideris, et al., 2019). To answer this call, this research seeks to explore the lived experiences of low-income individuals living along new transit infrastructure in transforming urban spaces to understand how spurred densification and investment has
shifted the physically and socially fabric of their communities. This research seeks to answer two research questions: First, how do low-income individuals perceive the changes that new infrastructure has brought, beyond an alternative mode of travel? Second, what does this mean for low-income communities in changing neighbourhoods?

This research focuses on the Region of Waterloo, a mid-sized region located in Southern Ontario, Canada. Over the past decade the Region’s major cities, Kitchener and Waterloo, have experienced substantial change, beginning with the growth and expansion of a tech hub, followed by the construction of a Light Rail line that runs through and connects both city’s urban cores. With the Region of Waterloo continuously ranking amongst Ontario’s fastest growing census’s tracks, and billions of dollars of investment along the line, this research prioritizes the voices of low income community members who are being priced out of these neighbourhoods.

Through 20 semi-structured interviews with low-income individuals living along the line, this research provides insight into how new transportation infrastructure has shifted the downtown culture, transforming the low-income experience. Importantly, it provides new perspectives into the ways in which low-income individuals are forced to navigate this changing space, drawing necessary attention to transportation integration into the “bundle of goods” associated with an attractive urban core (Higgins & Kanaroglou, 2018). This research works to add nuisance to the transit-induced gentrification debate, asking us to reflect on the primary role that new transit infrastructure is meant to play in any community. For these low-income participants, that role has not been to provide a viable means of getting around, but rather to contribute to the transformation of space. Overall, our research contributes to an important body of literature arguing for the importance of lived experience data from marginalized groups who are historically left out of the planning process.

Citations


Key Words: transit-induced gentrification, lived experience, low-income, gentrification, displacement

NEIGHBORHOOD TYPES AND TRAVEL BEHAVIOR: COMPARISON BETWEEN FOUR METHODOLOGICAL STRATEGIES

Abstract ID: 1192
Individual Paper

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With growing interest in sustainable travel behavior, existing studies explored the influence of built environments and demographics on travel outcomes. One research stream focused on developing neighborhood typologies that facilitate better understanding of travel behavior (Voulgaris et al., 2017). Similar works suggest that neighborhood types provide a holistic view of places, rather than a long list of built environments and demographic factors that
relate to travel outcomes. This approach further allows policymakers to generate effective implementation of land use and transportation policies that could encourage desired travel behavior (Song & Knapp, 2007). Following this approach, numerous works revealed how neighborhood types are associated with travel outcomes.

Existing studies explaining travel outcomes by adopting the neighborhood type approach report mixed results. For example, Voulgaris et al. (2017) classified census tracts in the US into seven neighborhood types and then examined the impact of these types on travel behavior. The authors found that there were no significant differences in trip outcomes across the identified neighborhood types. In contrast, Salon (2015) analyzed data from the state of California and reported significant differences in vehicle-miles-traveled (VMT) across five neighborhood types. Similarly, Lin & Long (2008) found that household travel characteristics varied by six neighborhood types classified according to socioeconomic factors.

There are several explanations to the mixed results. First, neighborhood types may depend on regional contexts. Previous works that generate neighborhood types from all census tracts in the US do not address regional differences. Second, researchers use different sets of built environment and demographic factors to identify neighborhood types. For instance, it would be critical to consider demographics when defining neighborhood types in regions that show significant patterns of segregation. Less is known about how different methodological approaches influence neighborhood types, and we also do not know whether the relationship between neighborhood types and travel outcomes is sensitive to the classification strategies.

The present study answers three questions. First, how does neighborhood types differ when we conduct the classification analyses at the national level and the state level? Second, how does neighborhood types change when we consider the socio-economic factors along with the built environment attributes? Lastly, how does different methodological strategies for identifying neighborhood types affect the relationship between neighborhood types and travel outcomes? Our paper contributes to the literature by providing a series of empirical analyses on whether developing neighborhood typologies are conducive to understanding travel behaviors.

We apply factor analysis and cluster analysis to classify neighborhood types by using built environment and demographic attributes collected from multiple data sources. We construct variables of density, accessibility, transportation infrastructure, and the diversity of amenities from the Environmental Protective Agency (EPA) Smart Location Database 2.0. We also collect socio-economic variables from the American Community Survey (ACS) data at the census tract level. After identifying neighborhood types with four distinct methodological approaches, we then empirically examine whether those neighborhood types show significant relationships with travel outcomes (e.g., trip frequency, length, mode share) derived from the 2017 National Household Travel Survey (NHTS) data.

Our findings reveal that the relationships between neighborhood types and travel outcomes depend on methodological strategies. Applying a state-specific classification method with both built environments and demographics better explained travel outcomes in regions that exhibit either racial or income segregation. In addition, different neighborhood types emerged when the classification analyses were conducted at the state level. This suggests that defining neighborhood types at the national level only produces general typologies, which in turn limits the explanation of travel outcomes. We argue that neighborhood types are conducive to explaining and modeling travel behavior when methodological strategies aim to address regional specific characteristics and demographics.

Citations

- Salon, Deborah. “Heterogeneity in the Relationship between the Built Environment and Driving: Focus on Neighborhood Type and Travel Purpose.” Research in Transportation Economics 52 (October 2015): 34–45.
The COVID-19 pandemic contributed to substantial declines in public transit ridership across the United States. These declines were not distributed evenly in space or equally among demographic groups. Communities with higher proportions of essential workers; Black, Hispanic, female, and older residents; and more COVID-19 cases and deaths saw less decline in transit ridership (Hu and Chen 2021). Overall, the travel patterns of transit riders, among whom people of color are disproportionately overrepresented, were more significantly disrupted by the pandemic than those of non-riders (Parker et al. 2021). Transit riders with less discretion over their amount of travel and without as much access to alternative transportation modes were less able to avoid or stop riding transit during the pandemic compared to more privileged riders (i.e., those who were White, wealthier, and owned a vehicle), and experienced greater transportation disadvantage and burdens as a result (Palm et al. 2021).

Evidence indicates increased expressions of racist views towards Black, Hispanic, and particularly, Asian people during COVID-19 pandemic have influenced their travel behavior. In a survey of residents of Melbourne, Australia, Ma et al. (2022) found that Asians experienced a significantly higher level of discrimination than other racial groups and were less likely to increase walking during the pandemic lockdown than White people. He et al. (2022) found that Hispanic transit riders were more likely to cite concerns about interactions with law enforcement as reasons for reducing or stopping their use of transit. A rise in reporting and media coverage of negative social interactions and experiences of racism in transit and other public/outdoor environments suggests that perceived discrimination may be affecting the travel behavior of people of color.

In this study, we examine reporting of perceived discrimination and transit use using data collected as part of the Understanding America Study (UAS) COVID-19 tracking surveys. The UAS maintains a nationally representative survey panel of US adult residents. Of the 3,734 unique respondents who completed the survey in 20 waves (Wave 10–Wave 29) between July 2020 and July 2021, 571 (~15%) reported having used public transportation sometime during the study period. More than 25% of transit users were non-White, compared to approximately 20% of non-users. Black users reported having used transit at consistently higher rates than Asian, Hispanic, and White users. Transit users reported perceived discrimination more and with greater frequency than non-users. Over the study period, reporting of perceived discrimination varied among respondents of different races; however, Black and Asian respondents proportionately reported more perceived discrimination than Hispanic and White respondents. Regression analyses indicate that people who reported never having experienced discrimination were significantly less likely to have used transit. These results are limited in that they do not necessarily indicate that people perceived or experienced more discrimination in transit environments, nor that perceived discrimination impacted transit use. Nevertheless, they align with other studies suggesting people of color may have been less able to avoid transit during the pandemic, potentially exposing them to greater infection and other environmental and social risks, including increased discrimination. Planners should work to improve social cohesion and promote inclusion in...
transit environments to address discrimination and potentially associated deleterious impacts on transit use by people of color.

Citations


Key Words: COVID-19, Perceived Discrimination, Public Transit, Transportation, Travel Behavior

EQUITY PLANNING FOR A FUTURE WITH CONNECTED AND AUTONOMOUS VEHICLES: REDEFINING READINESS MEASURES AND METHODS

Abstract ID: 1214
Individual Paper

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Despite the rapid development and growth of the technological competence of new mobility (i.e., connected and autonomous vehicles (CAVs)), there is evolving precarity and critical gaps in the equity implications of this technology. Transportation equity in a future with CAVs is manifested in many forms and at different stages of their evolution. Through burrowing concepts from theories of mobility justice (Sheller, 2018) and transportation equity (Litman, 2022), this study examines one ‘stage’ of equity implications – readiness for CAVs. CAVs function effectively, from an operational perspective, once the physical and digital infrastructure is designed to receive them (Jiang et al., 2022; Khan et al., 2019).

Equity is often neglected in conversations about these prerequisites. Results from our three-year research at the University of Illinois, on planning for CAVs, highlights the partitioners’ concern about the equity of CAVs. Planners imagined CAVs to be like electric vehicles (EVs) where they are made accessible and feasible for a fraction of the society. This is not only associated with the affordability of the vehicles themselves, but also the readiness of communities. Based on the requirements for receiving CAVs, most interviewed individuals agreed that their cities are not ready yet to adopt CAVs, both infrastructurally and socially. Additionally, less than 30% of our survey respondents stated their willingness to use CAVs, let alone share rides or share ownership of CAVs (Benkraouda et al., 2022). As a result, this jeopardizes the fair distribution of CAV benefits and burdens in our future mobility landscape. Consequently, we ask two main research questions: (1) How does the nature/character of readiness for...
CAVs and its variation define the equity landscape of CAVs? (2) How can the understanding of readiness for CAVs from an equity perspective inform future policies and guidelines?

This study adopts a mixed-methods approach that involves assessment of readiness elements through literature review and key informant interviews (i.e., practitioners, community members, mobility justice activists), a quantitative analysis of the readiness landscape through utilizing a set of mobility and demographic datasets (e.g., shared mobility, income, transit frequency, digital literacy, etc.), and informing future policymaking that steers regions to become equally ready for receiving CAVs and distribute their costs/benefits fairly.

We first identify the equity gaps ignored or overlooked in readiness studies. We achieve this by deconstructing each of the readiness measures/metrics/indicators and use a justice+equity lens (JEL). This includes analyzing the power hierarchies of these metrics, their benefits and costs, and the type of inequity (i.e., distributional vs procedural). We then scrutinize our deconstructions by running it through the different stakeholders and update the measure accordingly.

The overarching aim of this study is to introduce and promote equity analysis to become a vital component in CAV readiness assessment. Readiness is used as a tool for envisioning and informing the future of CAV adoption, deployment, and growth projectiles. Therefore, equity considerations are necessary to be included in the methods and not only in the outputs and results of readiness studies. Thus, this study will begin to fill several gaps in the literature and present the following theoretical and practical contributions; (1) Highlight and identify the equity gaps in current readiness approaches; (2) Advance equity/justice considerations in CAV readiness assessments through investigating neglected spatial variations, socioeconomic aspects, and mobility behavior; (3) Introduce a practical readiness tool that prioritizes fair accessibility and equitable future.

Citations


Key Words: Connected and Autonomous Vehicles, Transportation Equity, Mobility Justice

SURVEY AND ASSESSMENT OF LOCAL CLIMATE ACTION PLANS AND GLOBAL WARMING COUNTERMEASURES IN THE TRANSPORTATION SECTOR IN JAPAN

Abstract ID: 1232

Individual Paper

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In facing the substantial impacts of global warming and climate change on the environment, communities, and human health, many countries have set policies to reduce the amount of greenhouse gases (GHGs) in the future. Japan was the host country for the United Nations Framework Convention on Climate Change (UNFCCC) in
December 1997, where the Kyoto Protocol was adopted to commit the participating industrialized nations to greenhouse gas (GHG) emissions reduction. At the same time, Japan was ranked 5th in terms of GHG emissions in 2019, following China, the US, India, and Russia. In 2020, Japan emitted 1.149 billion metric tons of carbon dioxide equivalent (MTCO2e). Within the carbon dioxide emissions, the transportation sector accounted for 177 million MTCO2e (or 17 percent of 1043.5 metric tons), which is the third largest amount of emissions. In the efforts in the GHG reduction to address climate change, the transportation sector faces substantial challenges as many countries expect an increase in vehicle travel distance.

Local governments are closest to experiencing the impacts of climate change and the effects on the behaviors of individuals and businesses and implementing various measures to address problems at the ground level (Pasquini and Shearing, 2014). Because of these reasons, local governments have critical roles in identifying the need for adaptation and mitigation and developing measures, including land use, transportation, and infrastructure, that can be effectively implemented in the areas to reduce GHGs (Amundsen et al., 2018). Recognizing the critical roles of local governments, the national government of Japan took the approach of meta-governance and delegated its authority to implement policies to cope with global warming to prefecture governors and city/town/village mayors. Under this policy framework, local governments develop, implement, and monitor their climate action plans. However, the literature on the review and assessment of transportation-related climate action plans in the US indicates the lack of rigor in developing climate action plans and the resulting lack of effectiveness in achieving the stated goals of GHG emissions reduction (Deetjen et al. 2018; Gallivan. et al. 2011; Walker et al. 2010). Similar deficiencies were also found in local climate action planning and implementation in the UK (Bache et al. 2015).

This study examines transportation strategies within climate action planning and implementation among local governments in Japan, which are part of the implementation of national carbon reduction goals set by Japan’s National Government. The study addresses questions: (1) what transportation strategies and measures were adopted by local governments in climate action plans? (2) what challenges do local governments face in implementing these strategies and measures to reduce GHGs? and (3) whether or not local do governments keep consistency between climate action plans and other plans, such as master plans and transportation long-range plans?

The study analyzes the responses to the survey responded by the planners of one of the transportation-related units, which is considered most relevant to climate action planning by each local government. This survey is supplemented by another survey responded by the planners of a unit that prepares local climate action plans. Approximately 100 local governments participated in these surveys in 2021. The analysis of survey responses was supplemented by inquiries and interviews with multiple departments, divisions, and sections of six local governments.

This study contributes to the literature on climate action planning in the transportation sector and more broadly to the literature on transportation and environmental planning, which requires more proactive planning than treating environmental impacts as outcomes of transportation planning and projects.

Citations

E-scooter sharing services are quickly gaining popularity in many cities around the world as micromobility is presented as environmentally sustainable travel alternatives offering a more accessible and affordable travel mode. While the lighter and convenient services have the potential to decrease greenhouse gas emissions, little research has been conducted on the impact of e-scooter sharing services on spatial inequality in cities. Theoretically, e-scooters can improve mobility and reduce travel barriers for marginalized communities limited access to public transit. However, the majority empirical studies show that micromobility services such as shared bike and shared e-scooter lead to uneven spatial distribution across the city to exacerbate spatial inequality (Bach et al., 2023, Howland et al., 2017). Thereby, Bach et al. (2023) suggest active participation of public sector to attain spatial justice, but there is no empirical research for the shared e-scooter service driven by public sector.

In early 2020, as a policy to revitalize the Gangneung traditional market, the local government designed and introduced a shared e-scooter service in Korea. The traditional market is located close to the city center (CBD), but there are many old shops and it is gradually declining. Local governments intensively placed e-scooters and their docks around major high-speed rail stations and declining traditional markets, and provided digital discount coupons to shared e-scooter users when visiting stores. This is a good case of a local government policy in which the e-scooter was used as a means of improving the deprived area. Meng & Brown (2021) compare the spatial distribution of docked with dockless service for bike sharing in 32 US cities and conclude that dockless system is better for spatial equity to serve benefit marginalized communities. However, in the case of Gangneung, the disadvantages of the dock service are used in reverse to improve underdeveloped areas.

This study aims to fill the gap by investigating the impact of e-scooter sharing services on spatial inequality in urban areas. Specifically, we analyze the cluster of e-scooter in Gangneung with the big date of every two minutes the coordinate information of all e-scooters. Additionally, we utilize multi-year retail store data and survival analysis to examine how the associations between the e-scooter cluster and survival rate of the shops. Matching method is also applied to compare survival rates within and outside the target area. Our preliminary results show that it is difficult to see the differences compared to the control group outside the target area at the statistically significant level although their survival rate of the shop in traditional market area improved slightly.

Citations


Key Words: Spatial Justice, Spatial Inequality, E-scooter, Survival rate

HOW TRANSPORTATION INVESTMENTS NEGATIVELY IMPACT HOUSING MARKETS OVER LONG-TERM HORIZONS
Abstract ID: 1239
Individual Paper

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Transportation infrastructure development, while often providing much needed resources, has a problematic history of negatively impacting surrounding communities. In the United States, urban renewal decimated communities, splitting cultural connections and erasing entire neighborhoods from the map. I ask: how did places that were historically marginalized change over time and how did repeated cycles of transportation investment impact these locations?

Locations with good transportation access are especially at elevated risk of gentrification and displacement. Generally, as housing prices rise, places that were previously undesirable become sought after locations for new development. Existing homeowners and renters get pushed out as more affluent residents start moving into the area.

Many communities were disrupted first as highways cut through, causing pollution and detrimental health effects. Interstate highway development did not have the same immediate gentrification effects as urban housing renewal. Quite the opposite, while highways provided access and increased property values in the suburbs, they often resulted in diminished property values in the immediate vicinity of the highway within the city. There were several uncompensated costs to residents in the surrounding areas linked to highway construction, including disruption of local community, loss of access to services and employment, loss of property values, and increased noise and air pollution. Many of these factors carried multiple negative externalities as seen with the association of highway noise which decreased property values and increased cardiovascular health effects.

The influence of light-rail transit development on neighborhood change is somewhat contested, with several studies showing a significant correlation (Chava & Renne, 2022) while others find no evidence of impact (Delmelle & Nilsson, 2020; Nilsson & Delmelle, 2020). This suggests that neighborhood change spurred by transit investments may be influenced by local context and regional factors. A difference-in-difference model is commonly used to tease out the impacts of light rail investment on neighborhood change (Bardaka et al., 2019; Delmelle et al., 2021).

The research internalizes historic effects from urban renewal (redlining), highway and transit production, and shifts in property values along two sets of corridors – treatment (where highway and transit were built) versus comparable corridors (where transit was not built). With 634,000 individual property transaction in Jefferson, Denver, and Adams counties across Colorado’s Denver Metro Area between 1993 and 2021, I examine these complex longitudinal interactions.

I find that properties in both treatment and control groups see a lagged property value appreciation effect based on transportation infrastructure production. However, low-income communities see a higher rate of property transactions and higher property appreciation over the three decades, with greater impact from transit.
investments relative to highways. Overall, with repeat cycles of investment, highways first and light rail later, the communities surrounding the investments become more mono-cultural, high-income, and well educated.

Citations


Key Words: Equity, Gentrification, Investment, Lagged effect, Transportation

"I DON'T WANT TO LOSE MY INDEPENDENCE": TRAVEL BEHAVIOR AND MOBILITY NEEDS IN LATER LIFE

Abstract ID: 1240
Individual Paper

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Being able to move around freely and easily is essential for older adults to maintain healthy and independent living. When people get older, they experience changes to their mobility and travel behaviors. These changes can occur for a variety of reasons, such as reduced physical strengths and cognitive ability. All these factors can lead to a decrease in mobility and the number of trips, making it more difficult for older adults to go out, meet friends and family, and carry out their daily activities independently. When older adults lose their mobility and opportunities for social interactions, they are more likely to stay in their own homes, have greater rates of illness, disability, hospitalization, and mortality, and have a lower quality of life. A coherent framework that considers older people’s current mobility resources, preferences, and challenges is needed to understand their travel behaviors. Using a mixed method approach, combining surveys and focus groups, this study explores the heterogeneity in travel behavior of older adults and their motivations and needs for maintaining mobility in later life. By taking into account the lived experience of older people and their everyday mobility issues, this research provides a more nuanced understanding of older adults’ travel behavior and their needs for mobility.

Citations


Key Words: travel behavior, mobility needs, mobility challenges, older adults, aging

UNPACKING STREET REFORM: WHICH LEVERS ARE MOST EFFECTIVE...FOR WHAT PURPOSE?

Abstract ID: 1255
Individual Paper

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The current era of transport change in urban areas, full of technological advancement and uncertainty, is sparking unprecedented innovation. New vehicle types are being conceived, new key performance indicators are being discussed, and forward-leaning policy frameworks are being designed. Notwithstanding these improvements and opportunities, evidence for how our urban transport systems are improving is limited. Safety is worsening. Transit is losing ridership. Increased energy (via larger cars) is being demanded from the system. The inclusivity of how access to services are provided is declining.

This research focuses on the role of neighborhood streets—how their design is sculpted, how their use is mandated—to shed light on a blind spot on how current efforts can better overcome the challenges of creating less auto-reliant communities. It focuses on how the current context of innovation provides an opportunity to break the cycle of auto-dependence while maintaining the freedom of movement and high levels of access through unleashing the power of smaller private vehicles. Scant attention is devoted to how aggressive street design reform can improve local accessibility, a concept of growing importance, especially post-COVID. For purposes of this project, the scope is limited to local access streets in urbanized areas: neighborhood arterials to collectors.

Throughout the spring, summer and fall of 2023, the Smart Access Mobility group (based in Boulder, CO) will be conducting weekly meetings with specialists whose domain is urban transport (i.e., representing public planners, industry representatives, funding agencies). In each conversation, policies and proposed actions related to street reform will be introduced and discussed. Discussions will be wide-ranging and might hinge on code reform (e.g., MUTCD), managing expectations (e.g., how is curbside dining introduced), managing the curb (i.e., for delivery vehicles). Each of these changes usually run up against codes, institutional practices and legal regulations preventing widespread use. We will analyze traditional codes and how they could be adapted to accept new technologies, financial constraints and evolving energy trends.

The aim of these conversations is to create a taxonomy of reforms, together with the institutional, policy, or cultural challenges that are important to address. Such as: Which barriers the highest? Which ones are important to overcome? To what end...for improving what aspect of our urban transport system? This research will analyze of traditional approaches and how proposed action are changing due to new technologies, financial constraints and evolving environmental trends.

The final product will be an evidence-based matrix to better understand difficulties association with street reform, strategies that will lead to greatest success, and factors affecting the scale of change that could be expected (e.g.,
scraping the MUTCD or modifying it).

Citations


Key Words: access, streets, intervention, policy reform

MORE TRANSIT, MORE PEDESTRIANS: EXAMINING THE EFFECTS OF THE MBTA GREEN LINE EXTENSION ON PEDESTRIAN ACCESSIBILITY AND MOBILITY

Abstract ID: 1257
Individual Paper

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In December 2022, the MBTA Green Line Extension (GLX) to Somerville and Medford (Massachusetts) was opened, serving an estimated 50,000 daily passengers, many of whom would otherwise be using an automobile. The GLX not only increases transit ridership in Somerville, but also substantially increases foot-traffic in transit catchment areas, placing renewed pressures on the city to ensure that pedestrian routes to transit stations are safe, equitable and conducive to walking, especially for the more vulnerable street users. Given that GLX stations are also attracting a range of new development projects to their vicinity (e.g., at Union Square, in East Somerville, at Ball Square and Gilman Square), it is equally important to understand whether and how the newly proposed developments would contribute to transit ridership, as opposed to catering to higher-income, car-oriented home-owners who are attracted to improved amenities around transit stations while not relying on transit itself.

In order to examine these questions, we collaborated with the City of Somerville to (a) identify the most critical walking routes to GLX stations, especially for more vulnerable street users, and to examine their conditions; and (b) evaluate how upcoming urban development proposals around GLX stations could affect GLX ridership and impact pedestrian activity on surrounding city streets. We used empirical pedestrian counts from over 100 street segments to build a pedestrian flow model for Somerville, indicating peak hour foot-traffic volumes on all sidewalks and cross-walks in the city. The calibrated pedestrian flow model was then used as a scenario planning tool to assess how land use and infrastructure changes triggered by proposed redevelopment projects around GLX stations would likely contribute to GLX ridership and impact pedestrian flows in their respective areas. Our analytic approach goes beyond simple journey-to-work transport impact assessments (TIAs), offering a more holistic understanding of pedestrian needs in both existing and future settings around Somerville’s transit-oriented developments. The proposed framework and our findings provide key insights into how pedestrian accessibility and mobility can be affected by new transit lines or extensions to existing transit lines, thereby allowing planners to proactively improve network conditions around transit stations for pedestrians.

Citations
• Sevtsuk, A., Basu, R., & Chancey, B. (2021). We shape our buildings, but do they then shape us? A longitudinal analysis of pedestrian flows and development activity in Melbourne. PloS one, 16(9), e0257534.

Key Words: Pedestrian accessibility, Active mobility, Walkability, Public transit, Urban design

WHAT HAPPENS AFTER THE CRASH? EQUITY IN PLANNERS’ RESPONSE TO PEDESTRIAN AND BICYCLE CRASHES THROUGH INFRASTRUCTURE INTERVENTIONS
Abstract ID: 1260
Individual Paper

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Central Planning Issue: Marginalized groups in the U.S. face disproportionately high rates of pedestrian and bicycle crashes (Governors Highway Safety Association, 2021) and disproportionately low access to safe pedestrian and bicycle infrastructure (Rigolon et al., 2018). Recognizing these patterns, the American Association of State Highway Officials recently included racial and socioeconomic disparities in safety as one of the six highest-priority research needs pertaining to active transportation in the U.S. Past research has considered how inequitable infrastructure access is associated with crash disparities (Barajas, 2018), but limited work has examined equity in what happens after a crash occurs—that is, in how planners respond to crashes through interventions such as crosswalk improvements and bike lane investments (Rebentisch et al., 2019). Do the nature and timing of these responses vary in privileged vs. marginalized neighborhoods? Given that planning for active transportation safety in the U.S. remains largely reactive to documented crashes (Ferenchak & Marshall, 2019), this is a critical consideration for social equity.

Research Questions: In this analysis, we examine longitudinal data on pedestrian and bicycle crashes and infrastructure investments to address the following research questions (RQs):

1. Are there disparities in pedestrian and bicycle crash rates across sociodemographic groups?
2. Are there disparities in whether (and when) infrastructure interventions are made following pedestrian or bicycle crashes in neighborhoods of varying sociodemographic composition?

Methods: We address these questions using data from Los Angeles, CA. For crashes, we use the Berkeley SafeTREC Transportation Injury Mapping System to record the location of pedestrian and bicycle crashes (fatal and injury-only) between 2010 and 2019. For infrastructure, we use spatial data on crosswalk and bicycle infrastructure installations, by year, from the City of Los Angeles GeoHub data platform. For sociodemographic characteristics, we measure various indicators of race and socioeconomic status at the block group level using data from the American Community Survey.

We first use descriptive and regression analyses to estimate associations between pedestrian and bicycle crash rates and area-level sociodemographic characteristics (RQ1). We then use a combination of logistic, count, and hurdle models to examine how area-level sociodemographic characteristics are associated with (a) crash incidence and (b) the likelihood of an infrastructure change (e.g., new or improved crosswalk, new or improved bike lane) taking place after a crash occurs (RQ2). Work currently in progress is refining the unit of analysis, translating this
aggregate research to the intersection level.

Findings: From the above sources, our 10-year data set includes 27,726 pedestrian crashes, 20,915 bicycle crashes, 21,475 crosswalk legs, and 1,252 miles of bicycle infrastructure across approximately 2,800 block groups in Los Angeles. Although the analysis is in progress, preliminary findings suggest that pedestrian and bicycle crash rates are disproportionately high in block groups with higher proportions of people of color and lower median incomes. Interestingly, preliminary results also suggest that crosswalk improvements are more likely to be made after crashes that occur in marginalized block groups; this finding will be further explored in the disaggregate, intersection-level analysis, as will the distribution of bicycle infrastructure interventions following bicycle crashes. Overall, we expect to find that post-crash infrastructure interventions are more likely to be made (and made more quickly) in areas characterized by greater sociodemographic privilege.

Planning Implications: This analysis examines social equity in pedestrian and bicycle safety and in how planners respond to crashes in different types of neighborhoods. The results will contribute to a research need of critical national significance, revealing ways in which planners’ responses to pedestrian and bicycle crashes can advance equity in safety outcomes for marginalized groups.

Citations


Key Words: walking, bicycling, safety, crashes, equity

USING SMART CARD DATA TO UNDERSTAND RIDER ACTIVITY CHANGES DURING AND AFTER COVID-19 DISRUPTIONS IN PUBLIC TRANSIT SYSTEMS

Abstract ID: 1266
Individual Paper

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The COVID-19 pandemic has had widespread and long-lasting influences on activity-travel behavior across the world, especially for public transit riders (He et al., 2022). The lockdowns and service disruptions in 2020 reduced the number of overall trips and trips made by bus or train (Abdullah et al., 2020). Moreover, concerns of COVID-19 exposure, adaptations to transit service changes in early stages of the pandemic, and other post-COVID lifestyle changes, such as increased telecommuting, all could lead to persistent changes in how pre-pandemic riders use transit (Rahman Fatmi et al., 2022). Three years after the initial lockdowns, we use smart card data from the Metropolitan Atlanta Rapid Transit Authority (MARTA) to examine how rider activity changed throughout the
COVID-19 pandemic and to what extent riders reverted to their pre-pandemic riding patterns after the COVID-19 disruptions were over. Special attention is paid to reduced fare cardholders, riders in low-income, transit dependent communities, and those who frequently used routes affected by COVID-19 disruptions. As many public transit agencies are still seeing lower ridership than pre-pandemic levels (APTA, 2022), understanding the behavior changes among different rider groups will provide important insights into the recovery of transit ridership in post-COVID cities.

Citations


Key Words: Public transit, Ridership, Travel behavior, COVID-19

INSIGHTS INTO REMOTE WORK AND COMMUTE PATTERNS IN THE NEW NORMAL IN SEATTLE

Abstract ID: 1269
Individual Paper

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In the wake of the COVID-19 pandemic, the past few years have witnessed dramatic changes in work arrangements and activity-travel behavior. The possibility that altered travel patterns may persist well into the future could profoundly impact urban mobility, commuting activity, and transport systems. The increased adoption of remote work has been the 'new normal' during the recovery and post-pandemic period (Bonacini et al., 2020). This significant increase in the adoption of telework through late 2022 and the unequivocal decrease in shared mobility compared to driving alone indicates that the effects of the new normal on urban mobility are profound. In recognition of this new normal, this research expands on the CTR survey to thoroughly understand the impact of new work arrangements and patterns on activity-travel demand and mode choice for workers in the Seattle area. The survey was conducted between October 3rd and December 3rd, 2022, focusing on worksites in the central part of Seattle and elsewhere. We received over 64,000 survey responses from over 500 worksites.

Although recent studies have explored such changes in work arrangement, employers’ productivity/perception, adoption of telework, and their impact on center city activities and traffic patterns, a few studies have analyzed the implication of these changes on equity and the long-term effects of a new normal on changing mobility needs, and accessibility (Hu & Subramony, 2022; Sweet & Scott, 2022). This paper expands existing literature by better understanding the characteristics of the new normal (telework evolution, work mode, mode choice), and which trends are long-term and which are temporary. Moreover, the research investigates equity implications of the new normal to inform relevant policies and partnerships to address equity issues and accessibility.
Our survey findings show that based on weekday trips in Seattle, over 50% of commute trips are remote on an average weekday, which is eight times higher than in 2019. On the other hand, commute trips using public transit and shared modes have dropped by over 60% from their pre-pandemic rates. The survey shows that remote work is primarily adopted by higher-income, higher-educated, early middle-aged employees who are more likely to work in technology, finance, management, and business sectors. Employees who continue to rely on transit in 2022 are nonwhite, lower-income, younger workers who are likely to be single without mobility dependents.

Citations


Key Words: New Normal, COVID-19 pandemic, Commute, telework

ASSESSING CITY RESPONSES TO LOCAL CAR CULTURES

Abstract ID: 1278
Individual Paper

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American cities are dealing with a public health crises of traffic safety. Record numbers of people walking and biking are killed and injured in crashes. In response, cities are investing in street improvements and making other changes to aspects of local transport systems. At the same time, passenger vehicles and SUVs are growing in size, power and speed, which are strongly associated with the decrease in street safety. This research takes the position that cities have been focused on too few things with which they plan, and vehicle size, power and speed are viable objects of planning and regulation.

Regulating vehicles has largely been the purview of federal safety and transportation agencies. Yet, addressing vehicle characteristics directly is a critical aspect of traffic safety and is tied directly to existing efforts to improve safety, and quality of life, and improve walking and cycling conditions. Despite this need for policy interventions, there is little city and transport planning research that addresses these issues. What scholarship does exist provides valuable insight to the cultural importance of car cultures, but offers little guidance for how local laws and regulations may be used to improve the safety of streets.

In some cases, cities and local governments have acted as vehicle regulators through laws about sounds, height, speed limits, traffic lane sizes, aspects of vehicle design, and allowable uses of private vehicles. These cases of local regulations have been focused on regulating local car cultures. Examples of car cultures include the Chicano lowriders of Southern California on Black communities in Houston, street racing clubs in cities across the country, “Carolina Stance” lifted pick ups trucks in North Carolina, or camionetas in Los Angeles. Other examples include electric vehicle requirements in places like New York City, or golf car-oriented developments like Peach Tree City, Georgia or retirement communities in Florida or Arizona.

These examples show that local regulations can be effective tools for affecting vehicle size, shape and use. This
research will examine the origins and legal justifications of local regulations, and analyze policy interventions that can improve traffic safety and support sustainability efforts. Particular attention will be paid to how racial and justice concerns influence the decisions to craft local policies, and how enforcement of such rules is undertaken and enforced. The expected results from this research will hopefully suggest a new vein of interdisciplinary research for city planners, traffic engineers, and public health professionals.

Citations


Key Words: Safety, Car Cultures, Auto regulation, Municipal regulation, Equity

THE EFFECTS OF PARTISANSHIP ON TRANSIT SUPPORT IN GROWING AND SHRINKING METRO REGIONS

Abstract ID: 1279
Individual Paper

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The provision and maintenance of a comprehensive transportation network is a challenge that all U.S. municipal and metropolitan area governments must manage in order to effectively function. Despite the universality of this issue, how this is ongoing task is accomplished, how well it is managed, and the overall distribution of transportation resources is fundamentally a political issue that is often subject to the whims of the election cycle. Planning literature and prior research suggest that partisanship has a large effect on the generation and distribution of public goods: regional transit, with its racialized history and sizable impact on the local economy, has been a magnet for political conflict, often acting as a proxy for larger sociopolitical issues. However, the outcomes of public goods-based policy such as transit ballot measures are not decided solely on a region’s partisan balance, with the accessibility needs and growth trajectories of each metro region also exerting significant influence. For example, cities and suburbs that are experiencing rapid growth and have inadequate transportation infrastructure to accommodate new demand may face different imperatives than demographically stable or shrinking regions, which may be struggling with business attraction and supporting the mobility of aging or underemployed populations. This paper seeks to view these imperatives and pressures through a political lens, and will compare the effects of partisan politics on regional transit support in shrinking and growing cities. Using a large sample of transit ballot measure results from 2012 to 2022, this study seeks to identify the political and social characteristics associated with successful regional transit expansion and how ‘legacy city’ status may impact a voting population’s interests. Regression analyses of voting precinct-level electoral and demographic data will provide evidence of the influence of variables such as political candidate support, median income, and racial composition on transit ballot outcomes. In order to capture the regional cooperation or hostility that can make or break multi-jurisdictional transit projects, dissimilarity indices will be calculated for the two major political parties in each region to quantify political fragmentation within and between metro counties. A small subset of exemplary counties from both growing and shrinking regions will be examined to provide contextual insights into how partisan conflict and cooperation can impact ballot measure outcomes, as well as illustrate the constellation of social and economic circumstances that set the stage for those outcomes. This will include some discussion of the racial-spatial characteristics that have historically had major impacts on the success of regional transit.
development, and how partisanship can act as a proxy or evolution of race- or class-based division. This study will provide evidence of the differing pressures and characteristics that impact how successfully growth-oriented and legacy cities promote support for comprehensive transit. Understanding the patterns of political fragmentation, partisan attitudes, and the socioeconomic factors that shape them in these regions will contribute to an underdeveloped area of the transportation planning literature, and may provide insights into why high-profile and potentially impactful transit project proposals can fail at the ballot box.

Citations


Key Words: Partisanship, Transit, Race, Shrinking

INTEGRATING DEMAND PREDICTION AND VEHICLE RELOCATION FOR EFFICIENT SHARED VEHICLE SYSTEMS

Abstract ID: 1295
Individual Paper

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Shared vehicle (SV) systems have become an increasingly popular transportation option in urban areas due to their convenience, affordability, and environmental benefits (Bansal et al., 2016; Parks et al., 2007). However, the efficient management and operation of these systems present significant challenges, particularly with respect to the migration and rebalancing of idle vehicles. To maintain system balance and reduce operational costs, it is essential to develop effective strategies for relocating vehicles between different locations.

One of the key challenges of SV systems is the heterogeneous nature of the vehicle fleet. These systems typically include a mix of pure electric vehicles, gasoline vehicles, and hybrid vehicles, which require different types of maintenance, charging, and refueling services (Amjad et al., 2010; Parks et al., 2007). Moreover, not all parking lots are equipped with electric charging stations, which can limit the availability of electric vehicles in certain locations. Therefore, optimizing the migration and rebalancing of vehicles in SV systems is a complex problem that requires the integration of multiple factors, including vehicle type, location, and demand.

To address these challenges, this study proposes a deep learning-based algorithm for optimizing the migration and rebalancing of idle vehicles in SV systems. The proposed algorithm includes three main steps. Firstly, a deep learning-based city-wide shared vehicle demand prediction model is developed using historical data. This model is trained to predict the demand for shared vehicles in different locations and at different times of the day, taking into account various factors such as weather, traffic conditions, and events.

Secondly, based on the predicted demand, the algorithm solves the vehicle rebalancing problem by relocating idle vehicles from areas with low demand to areas with high demand. The optimal solution data is collected and used to train a deep learning model, which estimates the optimal strategy in multiple scenarios. Finally, the proposed vehicle balance model is applied to optimize the SV system, taking into account multiple factors such as vehicle type, location, and charging station availability.
The results of our experiments demonstrate that the proposed algorithm can effectively optimize the migration and rebalancing of idle vehicles in SV systems, leading to significant reductions in operational costs and time. Moreover, the proposed algorithm can be extended to incorporate multiple types of electric vehicles and charging station designs, providing an optimal service system for SV users.

In conclusion, the efficient management and operation of SV systems require effective strategies for the migration and rebalancing of idle vehicles. The proposed deep learning-based algorithm provides a promising approach to address this problem, by leveraging historical data and advanced machine learning techniques to optimize vehicle relocation and improve system balance.

Citations


Key Words: Shared vehicle, Deep learning, Vehicle relocation

LOCAL PERSPECTIVES ON INCLUSIVE AND MEANINGFUL PUBLIC INVOLVEMENT

Abstract ID: 1300
Individual Paper

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The role of the public in transportation decision-making has evolved over the last several decades. Dating back to 1962, federal legislation has underscored the role of public comment in transportation planning; subsequent transportation bills, other federal legislation, and executive directives have expanded provisions to make public involvement more inclusive. Specifically, these policy changes provided the opportunity for historically excluded or marginalized populations—including African-Americans, transit riders, older adults, and persons with disabilities—to participate in transportation decision-making (Bilotto et al. 2019).

However, despite being codified, mandates for public involvement largely ignore the reality that public involvement—and the transportation decision-making process more generally—is embedded in localities that are shaped by broader contexts. Specifically, McAndrews and Marcus (2015) point out that "...administrative public engagement processes do not eliminate politics and cannot be considered neutral, inclusive, or fair solely on the basis of administrative function," (pg. 547). Stark political divides can undermine planning efforts (Manning 2018), for example support for transportation reform (Klein et al. 2022).

Some critics of conventional public involvement also offer recommendations for improvements but they focus largely on changes to the engagement process (e.g., Boisjoly and Yengoh 2017)—without much regard to how external factors might impede public involvement. A deeper, contextual understanding of public involvement in practice can help inform future iterations of public involvement processes that more inclusive, meaningful, and equitable.

This paper draws from a qualitative study that originally explored the use of design thinking as a strategy for inclusive and meaningful public involvement in transportation planning—from the perspectives of practitioners,
Community residents and stakeholders, and decision-makers in Pontiac, Michigan and Montgomery County, Maryland. The research also captured their perspectives on the current practice of public involvement. This paper specifically addresses the following research questions:

What are considerations for conducting inclusive public involvement that incorporates diverse perspectives? What are challenges to conducting meaningful public involvement processes that influence relevant decision-making? The study used the Entities, Relationships, Attributes, and Flows (a group mapping exercise) and semi-structured interviews. Using a thematic analysis technique, transcripts from the mapping sessions and interviews were analyzed. Themes that emerged from the analysis included pragmatic insights about public involvement in transportation planning practice. Specifically, I identified barriers that can hinder planning’s ability to respond to the needs of transportation disadvantaged groups, including: 1) a lack of decision support (i.e., effectively packaging public feedback for consideration by decision-makers); 2) the influence of local politics; and 3) political fragmentation within a planning area (e.g., metropolitan region). The paper expounds upon these insights with examples from Pontiac and Montgomery County.

Citations

- Boisjoly, Geneviève, and Genesis T. Yengoh. 2017. “Opening the Door to Social Equity: Local and Participatory Approaches to Transportation Planning in Montreal.” European Transport Research Review 9:3. DOI: 10.1007/s12544-017-0258-4

Key Words: Public Involvement, Transportation Planning, Inclusivity

FREIGHT IN CITIES: A GROWING PLANNING CHALLENGE
Abstract ID: 1310
Individual Paper

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Large cities – particularly global cities - are the economic engines of the global economy. They are simultaneously financial and knowledge centers, gateways for international merchandise trade, and logistics hubs in the global freight network. As places of large populations and economic activity, cities are also vast local producers and consumers of goods, from automobiles to laptops to food and clothing. Cities are therefore dependent upon an efficient goods movement system. At the same time, goods movement generates serious externalities in the form of air pollution, greenhouse gas (GHG) emissions, congestion, crashes, and noise.

Urban freight activity is growing and will continue to grow because of continued globalization and urbanization, rising per capita income, and the growth of e-commerce. For example, US freight tonnage is expected to increase at about 1.2% per year through 2045, an increase of 37% from 2018.[i] Cities are increasingly challenged to effectively manage freight demand and reduce its negative impacts.
With increasing urban freight flows comes increased visibility of freight, conflicts with passenger demand, and public demands to solve freight problems. The 21st century has been a period of recognizing freight as an urban problem, research to understand urban freight dynamics, and extensive policy experimentation to mitigate urban freight problems. Nearly a decade ago, Giuliano and colleagues wrote a comprehensive assessment of urban freight research (Giuliano, O’Brien, Dablanc and Holliday, 2013). It presented the major problems of urban freight and inventoried the many policy strategies either implemented or explored to address them. The 2013 assessment provides an appropriate baseline to address urban freight challenges a decade later. This chapter discusses what we have learned about urban freight and how freight problems have changed.

This paper begins with the current state of knowledge of urban freight challenges. I document the overall increase in freight activity, and then discuss it major impacts: congestion, air pollution, traffic safety and noise. We find that the problems identified a decade ago continue, though sometimes in different magnitude or form. For example, truck vehicle miles of travel increased about 15% from 2010 to 2019. This increase contributed to growing congestion levels over the same period. More seriously, global transport emissions are increasing at about one percent per year, with growing truck traffic a major contributor.

To explain why truck traffic is increasing, I distinguish between last mile activity and freight flows associated with international trade, termed trade node problems. The focus for last mile problems is the rise in e-commerce and its associated impacts on supply chains and delivery patterns. Trade related freight has not undergone such dramatic changes, but the overall increase in trade generates more congestion and pollution problems while new technologies and automation suggest future structural changes. The paper discusses existing and emerging solutions and presents some concluding observations.


Citations


Key Words: urban freight, e-commerce, externalities

EXPLORING THE RELATIONSHIPS BETWEEN SOCIAL VULNERABILITY AND AMERICANS’ MULTI-DIMENSIONAL TRAVEL ADAPTATION FOLLOWING COVID-19

Abstract ID: 1340

Individual Paper

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After COVID-19 altered travel behavior worldwide, the travel trend among Americans has stabilized since March 2021, one year after the pandemic outbreak in the U.S. However, there is a lack of comprehensive understanding of the adapted travel trend, particularly across multiple dimensions. Moreover, little is known about the relationships between different communities and their adapted travel, as well as the spatial patterns of these relationships nationwide. With the U.S. government allocating several funding packages to address the long-term recovery from COVID-19 and support infrastructure development, it is important to understand the inequality that communities face in adapting to their lifestyles following COVID-19. This understanding will inform the allocation of resources to reduce inequality and promote equitable and sustainable development for society.

This research investigates the correlations between 23 social vulnerability factors and Americans' adapted travel across six travel dimensions from March 2021 to February 2022. The six travel dimensions include the number of visits to POIs, median dwell time in POIs, median distance from homes, and the number of visits to POIs during three daily periods: 6 am to 3 pm, 3 pm to 7 pm, and 7 pm to 0 am. The 23 social vulnerability factors include the 2020 Social Vulnerability Index (SVI) from the Centers for Disease Control and Prevention (CDC), four individual races and ethnicities, and four additional COVID-19 highlighted variables: no internet access, living alone, obesity, and mental health issues. We employed Geographically Weighted Regression and Ordinary Least Squares models and mapped the spatial autocorrelations for four selected variables.

The results show that people living in crowded situations make more trips and stay longer in Points of Interest (POIs), while those living alone make fewer and shorter trips. These results suggest that people who lack sufficient individual space and privacy in their homes travel more frequently. Older adults are most pronounced in making fewer trips but staying in POIs longer and traveling farther. People with mental health issues visit POIs more frequently but for shorter durations and distances. Many poor communities decrease the number of trips. Overall, the study uncovers the adjusted relationships between communities and their travel adaptation, offering valuable insights for urban planners and policymakers to better understand the needs of socially vulnerable communities. These insights can guide communities towards healthier and more sustainable lifestyles through the provision of appropriate facilities and services.

Citations

An unprecedented effort to reorient regional transportation planning in California to reduce greenhouse gas emissions (GHG) has been underway since the 2008 Sustainable Communities and Climate Protection Act (Senate Bill 375). The law requires the state’s 18 metropolitan planning organizations (MPOs) to plan for transportation investments guided by future visions for compact land development and by regional GHG reduction targets; more integrated land use and transportation planning are expected to help realize both. The bill also requires MPOs to attend to socioeconomic equity in the planning process, requiring analysis to account for the level of access that people – considered by income level – have to frequent and reliable public transit and to the jobs they can access with such service.

To date, many question the law’s impact and regional efforts to implement it. The California Air Resources Board (CARB), the agency responsible for tracking SB 275’s implementation and progress, concluded the state “is not on track to meet GHG reductions expected under SB 375,” in its own 2018 report for the legislature. That assessment showed VMT and GHG emissions from passenger vehicles and trucks were going up. Meanwhile, California’s housing crisis has exacerbated social inequities and access to transit- and job-rich neighborhoods for people of low income.

This work focuses on the regional Long-Range Transportation Plan (RTP) development process and how projects get formally accepted into that key legitimating and gatekeeping document. Second, the study examines how MPOs move projects from the plan to funded reality, in the Transportation Improvement Program (TIP). We ask what features of these processes -- these two key levers of MPO decision-making – are responsible for the lack of progress.

We interview senior staff from 7 California MPOs who are involved in development of the RTP that sets the stage for metropolitan transportation investment over a 20-year time horizon and of the TIP that identifies the near-term projects to be constructed with available revenue over the next 4-5 years. MPOs have been selected to represent a diverse group that vary by size and region. We ask staff to discuss how the MPO develops its RTP, how formal “project assessments” are used to inform choices, the role that climate and equity considerations play in project selection, and query whether these goals are balanced with others in the region. We also ask about the role of community advocates and other stakeholders in the MPO planning processes. To complement this staff-level view, we also convene two focus groups, one including MPO board members, and another convening advocates, to understand their views of MPO RTP and TIP processes.

Emergent themes in this research put California’s limited GHG reduction progress and its growing inequities in context and point to fundamental dynamics and tensions in regional transportation planning within and beyond the state. First, the paper discusses the divergent realities of California’s coastal metros from the state’s rural and economically struggling regions in the SB375 policy context. Second, it reveals the impact of leadership both within and outside the MPO process. Some leaders with expansive visions and commitments to GHG reduction, equity, and other state goals have been willing to tangle with parochially focused board members to get things done. Other leadership appears to allow the status quo. Finally, it highlights the inherent tensions between local governments and regional organizations, particularly visible in the deference – or lack thereof – given by California’s MPOs to local “legacy projects” approved at the ballot box and funded by decades old sales tax measures, before SB 375 constrained MPO plans.

Citations

PERCEIVED PARENTAL BARRIERS TO CHILDREN’S WALKING TO SCHOOL IN SPRAWLED CITIES

Abstract ID: 85
Research in Motion (RiM)

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Children’s daily physical activity plays a major role in their health and well-being; it can also help them maintain a healthy weight. Walking to and from school is the most common form of physical activity that provides an opportunity for students to be active every day. However, walking to school recently declined sharply, and most students depend mainly on motorized modes. Parental barriers to walking to school are crucial to promote walking to school, so this study examines parental barriers to walking to school in Najran, Saudi Arabia. A total of 1218 parents completed an online questionnaire, and the results showed 81% of school students commuted by motorized modes, while only 19% walked to school. The descriptive analysis showed that the most common barriers reported by parents were dangerous traffic conditions, easier accessibility and more convenient motorized modes, lack of sidewalks, no other children to walk with, dangerous crosswalks on the routes to school, dropping on the parent’s way to work, and long distance to school, respectively. Applying binary logistic regression also indicated that the probability of a student walking to school is affected negatively by long distance, absence of sidewalks, and dropping on the parent’s way to work. Understanding the perceived parental barriers to walking to school can help practitioners and policymakers to develop some future interventions that aim to promote walking to school, such as establishing new schools and distributing them equitably, implementing complete and safe pedestrian infrastructure, increasing some social support, and developing educational interventions for parents and children about the benefits of walking to school.

Citations


Key Words: active commuting to school, motorized modes, distance to school, pedestrian infrastructure

MODULE FOR FORECASTING NON-MOTORIZED TRAVEL MODE CHOICES IN A TRAVEL DEMAND MODEL – A MIXED EFFECT RANDOM FOREST MODEL
Abstract ID: 100
Research in Motion (RiM)

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The need to account for walking and cycling in travel-demand models has long been recognized, and many planning agencies have incorporated non-motorized travel into their models. In the traditional four-step model, mode choice is typically the third step in the process, following trip distribution and preceding network assignment. Conventional four-step models have traditionally focused on motorized transport (Okrah, 2016). However, as the Federal Highway Administration guidebook (1999) stated, properly forecasting bicycle and pedestrian travel and advancing the state-of-the-practice in this area have a variety of uses, such as estimating the benefits of a proposed project (e.g., number of users served, reduction in automobile emissions and energy consumption), prioritizing projects based on the most significant interest to existing users or on the greatest payoff in attracting new bicyclists or walkers, planning bicycle and pedestrian networks, identifying and correcting deficiencies in existing networks, and planning for their safety.

In the conventional four-step model, mode choice is determined using probabilities for each mode estimated from the characteristics of the trip, the modes, the traveler, and the environment in which the travel occurs (Travel Forecasting Resource; www.tfresource.org). While over the past two decades, a vast body of literature has investigated the influence of the built environment on travel mode choice behavior (Zhang, 2004; Lee et al., 2014; Khan et al., 2014; Munshi, 2016), only a few agencies have considered the built characteristics in which the travel occurs. In other words, for modeling travel mode choices, metropolitan planning organizations (MPOs) often control for trip, mode, and sociodemographic variables but not for built environmental variables. Moreover, not all MPOs consider nonmotorized modes of travel (e.g., walk and bike) in their mode choice modeling process.

Using a machine learning algorithm (mixed-effect random forest (MERF)) and regional household travel survey (HTS) for 31 diverse US regions consisting of 810,030 trips by 86,400 households categorized by trip purpose and controlling for the built environment characteristics of each household, we attempted to illustrate that the built environment, characterized by the so-called D variables (i.e., development density, land use diversity, street design, distance to transit, and destination accessibility), can play an essential role for individuals to choose nonmotorized modes of transportation.

We generated three MERF models for each trip purpose separately, including Home-based-work, non-home-based, and home-based-other trips. The results show that walk, bike, and transit probabilities decrease as the vehicle ownership of a household increases. Household size is another sociodemographic variable that we controlled for, and based on the trip purpose, non-motorized modes can have both higher and lower probabilities relative to the auto mode. Travel time as our choice-specific variable has a negative sign in all three models, which
implies that the higher the travel time of a mode, the lower the relative utility and the lower the probability that a given traveler will choose that particular mode.

Our study results confirm the vital role that the built environment plays in shaping people’s mode choice behavior. Overall, almost all of the Ds that we could control for in this report are found to be significant and negatively correlated with car use for one trip purpose or another after controlling for sociodemographic and environmental variables. From urban planning and transportation public policy perspectives, this study suggests that sustainable modes of travel become more favorable as the built environment becomes dense, mixed, well-connected, transit-served, and job accessible.

Citations


Key Words: Non-Motorized Travel Mode Choices, Travel Demand Model, Mixed Effect Random Forest, Machine Learning
the World Bank develop its urban transportation investment strategy, Gwilliam (2002; 2003) argues that the 10–12% of land area dedicated to roadway in Asian cities is insufficient and well below a 20%-30% of space in US cities. No methods or citations support these assertions.

Scholars provide estimates in a handful of US cities and counties. Using spatial parcel data, Millard-Ball (2022) estimates that 17% to 21% of land area is dedicated to residential streets in 20 urban counties, predominantly from California and Texas, with adequate parcel-level data. This is generally consistent with 13%-30% estimates collected from city officials and summarized in Meyer and Gómez-Ibáñez (1981) and estimates based on satellite imagery for the Atlas of Urban Expansion (Angel et al. 2016). Estimates, however, likely vary substantially based on different measures of land area and fine details of how satellite imagery is being processed.

No systematic estimates exist of the total amount of land area dedicated to roadway in US urban areas or its value. Existing city-level estimates are disproportionately from the largest cities, like New York, Los Angeles, and San Francisco. Without an accounting for the amount and value of land dedicated to roadways, it is difficult to estimate whether there is too much or too little roadway or even whether outcomes, such as commute times, wealth, or employment, vary with the amount of roadway.

Land values, and thus opportunity costs, also vary substantially across and within US cities. Areas with high land values and a high share of land dedicated to streets are likely particularly overbuilt. Millard-Ball (2022) estimates the total value of residential streets per residential housing unit across 20 counties varies from $7000 around San Antonio and Fort Worth, TX, to nearly $150,000 in Santa Clara, CA.

In this paper, we present a novel methodology for combining publicly available datasets to generate predictions of roadway widths by place and by roadway-class across US metropolitan areas. We then match these predictions to estimated land values (Davis et al. 2021) and aggregate data by metropolitan subarea, core city, and downtown for 316 Primary Metropolitan Statistical Areas (PMSA). Approximately 260 million people, more than three-quarters of the US population, reside in these PMSAs.

Citations


Key Words: road widths, transportation infrastructure, land value, urban form

UNDERSTANDING LOCAL TRANSPORTATION NEEDS OF OLDER ADULTS LIVING IN MID-SIZED CITIES

Abstract ID: 238

Research in Motion (RiM)

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Fast growing population of older adults in North America faces numerous challenges in fulfilling their everyday transportation needs (Loukaitou-Sideris et al., 2019; Rosenbloom, 2009; Hodge, 2008; Rosenberg and Everitt, 2001). In Canada, the oldest and most rapidly ageing cities are small (population 10,000-50,000) and mid sized cities (population 50,000-500,000) (Hartt and Biglieri, 2018). Compared to large metropolitan areas, mid sized cities have more automobile based transportation reliance (Bunting et al., 2007), less funding and expertise for urban planning (Seasons, 2003), and are less likely to have developed and implemented age-friendly planning considerations (Hartt and Biglieri, 2018). Our knowledge regarding transportation needs of older adult population residing in mid sized cities is highly limited as most of the prior research on older adults has used data from large metropolitan areas such as Los Angeles (Loukaitou-Sideris et al., 2019), Toronto (Roorda et al., 2010), and Phoenix (Rosenbloom, 2009). Further, very little has been reported so far specifically about gendered mobility needs of older adults (Mitra et al., 2021; Loukaitou-Sideris et al., 2019).

In this paper we examine local transportation needs, and challenges faced in fulfilling those needs, of older adults living in mid sized cities. We use Kingston, a mid sized Canadian city located in Ontario, as our case study. The city has a total population of 172,000 and a fairly large population of adults older than 65: 36,965 or about 21.4 % of the city’s total population (Statistics Canada, 2021). Kingston offers multiple local transportation modes, including a reasonably good public transit service (Schiller 2019). Hence, the city appropriate for this study. The study includes quantitative analysis of household travel surveys conducted by the City of Kingston in 2019. This analysis helps establish existing travel patterns of older adults. As household travel surveys do not include information about trips desired but not made, or challenges faced in accomplishing the trips made, we collect primary qualitative data using semi-structured interviews. Qualitative data analyses help determine the transportation needs, and challenges encountered in fulfilling those needs, of older adults in general and women in particular.

Citations


Key Words: Ageing, Travel

TRANSPORTATION JUSTICE IN THE OFFICE AND THE HOME: THE DUAL EXPERIENCES OF BLACK TRANSPORTATION PLANNERS AND ADVOCATES

Abstract ID: 432
Research in Motion (RIM)

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This paper intends to be a qualitative study following the evolution of transportation justice, here defined as racial justice in transportation, through the eyes of Black transportation planners and advocates by asking two questions: What do Black transportation planners and advocates feel about transportation justice, in their workplace and their community? And how have their perceptions of transportation justice evolved over time?
There will be a focus on reflexivity as Black professionals and as Black people, and the multitude of identities they host every day, and how this impacts their approach to transportation justice, over time. I intend to distinguish this research from present literature on the experiences of Black and Latinx practitioners that focus on snapshots in time, particularly literature with a focus on DEI/D&I and transportation planning.

This ethnographic study will be conducted using qualitative methods, notably in-depth interviews. The interviews will include 10 to 15 Black American planners and advocates with at least 10 years in the field of transportation planning, policy, or advocacy. The selection will be open to various ethnicities, gender, and creed with that may include, I hope, reflection on transportation justice through both a personal and professional, intersectional lens. The focus here on mid-level to senior interviewees is to help establish a depth of knowledge and intimacy with transportation justice. Data collection will be documented through an interview protocol.

The interviews will be conducted primarily through videoconferencing, for I am interested in a range of interviewees from different geographic areas. The American South is especially of interest to my research because approximately 56% of Black Americans live in the South, and there is currently an exodus or the New Great Migration happening amongst Black Americans seeking greater economic opportunity.

I anticipate two strains of insight from the interviews: optimism towards transportation justice, however it is defined, and synergy in that optimism despite geography and professional experience. I anticipate optimism because Black Americans, have never been afforded the privilege of embracing cynicism and apathy. Therefore, despite anticipating a litany of feelings over their professional lives, I also firmly anticipate optimism towards transportation justice as a concept and in practice. Regarding synergy, because of the underlying dual focus of racial justice in transportation in this study, there may be stories of frustration and anger due to the stonewalling of explicitly race-centered -- specifically Black-centered -- conversations.

This intended study aims to add to a scant amount of literature on the experiences of planners and advocates and the potential of these professionals living in targeted communities for transformative change. There is literature on the experiences of transit administrators attempting to integrate social justice in transportation planning, but there is much less focus on how Black transportation planners and advocates think and feel about policies and programs that will directly impact their family and neighbors. This is because we still expect a divide in where people live, work, and the communities that agencies and organizations intend to address. This may also be a symptom of the transportation planning field being majority white. However, I argue that to ensure an empathic and effective approach to building with transportation justice, it will behoove fellow planners and advocates to learn from the personal experiences of our racialized co-workers who occupy both a seat at the table and a spot on the menu.

Citations


Key Words: Transportation, Black Americans, Organizations, Attitudes, Perspectives
A QUASI-EXPERIMENT EVALUATING THE IMPACTS OF SMARTPHONE TRANSIT APPS ON TRANSIT USE IN AUSTIN, TX

Abstract ID: 566

Research in Motion (RIM)

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In the past decade, smartphone transit apps emerged as a cost-effective strategy to promote transit use and user experience. Despite the growing number of transit providers developing and deploying transit apps, the impact of transit apps on travel behaviors is largely unknown (Bian et al., 2021; Brakewood et al., 2014), it is unclear how transit apps would encourage transit use and which groups of people would be more likely to benefit from transit apps.

This quasi-experimental study carried out in Austin, Texas, aims to explore if and how introducing a transit app would promote transit use. Each participant was evaluated before and after the app intervention, over approximately 1.5 months. CapMetro, the primary public transportation provider in Austin and the surrounding suburbs, has been operating an official transit app – the CapMetro app since 2014. In the fall of 2022, study participants were recruited in person and online. Eligible individuals are those who (1) are adults without mobility impairment or disability that keeps them from riding transit; (2) live in the Austin area; (3) own a smartphone; (4) have not used the CapMetro app before; (5) select "unreliable service", "difficulty in planning the route", "do not know how to use the system", or "waiting too long at the stop" as primary transit use barriers; (6) can drive and have access to private vehicles; and (7) do not use the CapMetro services more than once a week. A total of 19 participants completed the study. A 10-min online training about the CapMetro app was provided as the intervention. Surveys, individual interviews, and Google Maps Timeline were utilized to capture the perceptions and travel behaviors before and after installing the app. App usability was assessed by the System Usability Scale (SUS) (Brooke, 1996). The transtheoretical model (Prochaska & DiClemente, 1982) was adopted to capture participants' stages of behavior changes.

Results showed the CapMetro app was perceived as a high-quality app with a mean SUS score of 85 (out of 100). Mobile ticketing and trip planning functions were recognized as the most helpful features. Out of the 19 participants, 18 considered the CapMetro app a provider of useful information, and 11 participants mentioned that the transit app made public transportation more accessible and easier to ride. After learning how to use the app, two people reported they were thinking about taking public transportation in the near future. Two participants already started riding public transportation on a regular basis after stalling the CapMetro app. Two other participants stated their family members started to use transit after they introduced the CapMetro app to them. Participants who reported travel behavior changes tend to be young and new to the city. Low stress and low costs associated with transit use were the main reasons to ride transit. The results suggest promoting transit apps could be an effective digital marketing strategies for transit agencies. Interventions like used in this study can serve to attract new transit users, especially those younger and newer residents of the community. Based on the findings, we shared insights on where and how to promote transit app among young and new residents. The study advanced knowledge on how to market transit apps with the aim to increase transit use.

Citations

CURRENT PRACTICES AND EMERGING TRENDS OF TRANSIT APPS IN THE USA

Abstract ID: 572

Research in Motion (RiM)

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Smartphone apps have become increasingly popular as ways to promote transit use. Therefore, many transit providers have started operating smartphone apps for passengers in the past decade. However, the transit app related decision-making and deployment process in different transit agencies are largely unknown, and so are the benefits and impacts of transit apps from transit agencies’ perspectives (Bian et al., 2021). Many transit operators, with limited experience in the latest technological innovations, face various challenges during operations (Brakewood, 2020).

This study overviewed transit apps used in 295 transit agencies (American Public Transportation Association, 2020) to examine the current status of transit app deployment in the US. Most transit agencies (81.4% or 240 out of 295) provided transit apps to their customers. About half (N=125) of the 240 transit agencies partnered with off-the-shelf private-sector app providers, such as the transit app, myStop, TransLoc, and Token Transit. The other half (N=115) developed their own officially branded public sector transit apps, which was more prevalent among large transit operators.

From July 2021 to Feb 2022, we interviewed 21 professionals from 17 transit agencies who had been leading their transit app projects. The interview questions covered the app’s benefits and costs, challenges in development, and corresponding strategies. These professionals viewed transit apps as a critical component of their account-based fare system. They stated that transit apps enhanced user experiences by enabling account-based mobile fare payment and efficient two-way communications.

Based on the costs and level of control, we identified five business models for developing transit apps: private sector shared app, white-label app with minor customization, white-label app with major customization, in-house design vendor development, and in-house development. These models provided a spectrum of choices for transit agencies. Over the past decade, an increasing number of medium and large transit agencies have chosen the white-label app model since the products in this industry have become more mature and standardized. Meanwhile, some large transit agencies still gravitate towards in-house development models because they offer more flexibility and control.

In addition, we have identified two major trends. Large transit agencies usually favor local exclusive transit apps, tailored to better serve their local passengers. While small and medium sized transit providers prefer to join aggregator apps that serve multiple, often hundreds of, agencies in different regions or countries. By integrating multi-modal transportation information, aggregator transit apps have the potential to grow as Mobility-as-a-Service application platforms (Watkins et al., 2021). However, to deliver high-quality transit apps, transit agencies face numerous challenges. Transit agencies often find it time-consuming and challenging to collect and provide high-quality data. Standardizing and modernizing the transit data exchange protocols are critical for future
executions. In addition, the fast-evolving nature of transit apps poses challenges in collaborating with vendors. Correspondingly, interviewees shared strategies and recommendations for vendor selection, contract negotiation, performance evaluation, and risk management.

This study contributes to the knowledge about transit apps. The study findings would help planning researchers and public transit practitioners to better evaluate the advantages and disadvantages of different options, make informed decisions, and prevent avoidable problems.

Citations


Key Words: Transit agency, transit app, digital experience, information technology, fare payment

INCLUSIVE EVACUATION: TRANSIT AND PARATRANSPORT EVACUATION DURING THE CALDOR FIRE

Abstract ID: 595
Research in Motion (RiM)

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The 2021 Caldor Fire necessitated the unprecedented evacuation of the Lake Tahoe Basin in Northern California and Nevada, displacing over 30,000 people in the immediate basin and over 50,000 people total. Lake Tahoe is an international tourist destination, a series of several “mountain towns” and surrounding communities arrayed largely along a single corridor sandwiched between steep, forested mountains of the Sierras and the lake itself. Like much of the American west, the area has seen decades of drought and increasing temperatures along with insufficient fire prevention like controlled burning, leading to extreme fire vulnerability. This case study explores the planning, policies, and procedures before, during, and in response to the fire, focusing on the Tahoe Transit District, the lead agency responsible for locating, alerting, and transporting people with disabilities, including both car-free households and unhoused residents of the area.

In addition to the topographical challenges and limited roadways for evacuation, the region’s income inequality and housing crisis mean there are significant number of transit-dependent and unhoused people who are particularly vulnerable to evacuation challenges. The literature on disability and accessibility highlights that land use system, the transport system, temporal component, and the individual component (context factors of culture/religion, digital access options, perceived accessibility, and normative judgments) impact the access to evacuation (van Wee, 2022). There is limited involvement of marginalised and socially vulnerable populations through the wildfire federal programs and wildfire planning funding in the United States (such as State Fire Assistance and Community Wildfire Protection Plans), which reduces the building of resilience of such communities against wildfire (Renne & Mayorga, 2022).

This study examines the transit- and paratransit evacuation of people during the Caldor Fire, including: (1) existing
plans and procedures before the fire; (2) the evacuation, including communications, operations, successes, and challenges; (3) evacuation planning in the 18 months following the fire, including any adoption of plans, policies, or procedures based on retrospective about the event. This study uses a “research case study approach,” which is well-suited to examining the “how” and “why” of a contemporary event, including the operational processes over time and the interaction of the decision-making processes within their real-world context (Yin 2017). To develop the case study, we use discourse tracing (LeGreco & Tracy, 2009) to examine the discursive practices related to the evacuation, including plans, public comments, communications with constituents, and interviews with agency staff. By assembling a chronology leading up to, during, and immediately following the event, discourse tracing provides an ideal framework for understanding “social processes, including the facilitation of change and the institution of new routines (LeGreco & Tracy, 2009, pg 1516).

In the case of the Caldor Fire, we seek to understand how relevant agencies and staff planned for potential evacuation using transit and paratransit, how that evacuation functioned during a significant wildfire event, and what changes or new planning occurred because of the successes and challenges of that event. As qualitative research, the overarching goal is provision of grounded, practical insight that benefits both the involved agencies and staff in the Tahoe Basin, and can be “analytically generalizable” (Yin, 2018, pg 37) to other transit and/or paratransit evacuation contexts.

Citations


Key Words: wildfire, inclusive evacuation, transportation justice, disaster planning

GREEN INFRASTRUCTURE AND GENTRIFICATION: MULTIUSE TRAILS AND THE HETEROGENEITY OF NEIGHBORHOOD CHANGE

Abstract ID: 756
Research in Motion (RiM)

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Problem: Public and nonprofit organizations have invested billions in green infrastructure such as multiuse trails to provide urban residents opportunities for recreation and active travel and to support local economic development. Scholars have shown that most urban trails are associated with modest increases in sales prices of residential properties in adjacent neighborhoods, that some high-profile trails are associated with larger increases in property values and gentrification, but that gentrification does not always occur. They note the need for studies of the localized effects of new trails.

Research strategy and findings: We analyze changes in multiple indicators of gentrification following development of three multiuse trails in U.S. cities. These indicators include both shelter/housing and socio-demographic characteristics of neighborhoods (Census block group, CBGs). Using a case-control, pre-post design with adjacent CBGs as the unit of analysis, we show the effects of these multiuse trails on adjacent neighborhoods are
heterogeneous in each city. Gentrification indicators generally are consistent between treatment (i.e. CBGs with their centroids inside the half-mile buffer of each trail) and control groups (selected from the same city by Nonparametric Propensity Score Matching) along the Shelby Farms Greenline in Memphis, Tennessee, but patterns of neighborhood change along the Lafitte Greenway in New Orleans, Louisiana and the Metropolitan Branch Trail in Washington, D.C. are mixed and more complex. Our pooled models using Hierarchical Linear Regression underscore the heterogeneity of neighborhood changes in the study areas. Our results validate concerns about gentrification but also confirm the previous findings that the effects of trails may be highly localized (Crompton & Nicholls, 2019; Rigolon & Németh, 2020) and that “green gentrification” is not inevitable (Rigolon et al., 2020; Pearsall & Anguelovski, 2016; Wolch, Byrne, & Newell, 2014).

Takeaway for practice: Each trail was developed through heterogeneous neighborhoods with subareas that were both gentrifiable and non-gentrifiable. Our analyses provide evidence of gentrification along each trail, but this evidence varies and reflects the characteristics of the adjacent neighborhoods. The localized effects provide support for engagement of neighborhood populations when developing strategies to mitigate gentrification and displacement. Consistent with previous scholars (e.g., Rigolon et al., 2020), we recommend provision of affordable housing near green infrastructure, ensuring planners reflect the race and ethnicity of the neighborhoods where facilities are planned, specific outreach to the most marginalized populations, and plans to engage residents besides wealthy newcomers. These strategies clearly are necessary avoid outcomes such as displacement of the residents the facilities were meant to serve.

Citations

- Rigolon, A., & Németh, J. (2020). Green gentrification or ‘just green enough’: Do park location, size and function affect whether a place gentrifies or not?. Urban Studies, 57(2), 402-420.

Key Words: multiuse trails, green gentrification, neighborhood changes

JUSTICE-CENTERED PARTICIPATORY RESEARCH ON TRANSPORTATION AND HEALTH

Abstract ID: 768
Research in Motion (RiM)

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Mobility plays a fundamental role in human development and well-being, providing the access to daily wants and needs that enable people to survive and thrive. At the same time, modern mobility systems pose a raft of challenges to ourselves, our settlements, our ecosystems. We lose time and quality of life in traffic congestion,
suffer from death and injury from crashes, breathe foul air, suffer from infrastructure and services disrupting neighborhoods and natural environments, and face ever-increasing global threats from mobility’s large contribution to global greenhouse gas emissions. Mobility’s costs and benefits also manifest themselves with deep inequities, as the wealthier enjoy more of the comforts and convenience of modern mobility while the vulnerable and/or marginalized suffer more of the costs, in terms of ruptured neighborhoods, polluted air, higher relative financial and time costs, greater safety and security risks, etc.

In the United States, these impacts disproportionately affect Black, Indigenous and People of Color (BIPOC) communities, a result of disparities built into the systems. Despite efforts (e.g., Title VI) to dismantle institutional barriers to greater inequity, the inequalities persist, including in public transportation, where BIPOC-identifying people represent 60% of users. A recent Guidebook for Transit Agencies, Equity in Practice, aims to help public transportation operationalize equity in day-to-day practices, to establish it as “guiding value” and help “shift power” to marginalized groups of people “so they can meaningfully shape the transit practices that affect them.”

Participatory Action Research (PAR), a research approach explicitly designed to empower community members as co-researchers in question formation, data gathering, and analysis, is well-suited for transforming transportation research and practice to better empower marginalized communities. PAR studies in transportation are, however, exceedingly rare. In an effort to deepen and expand the use of PAR in transportation research seeks we are co-designing and co-develop research questions and interventions for in a local community within the Boston metropolitan area, strengthening local partnerships and collaborations between academics and community groups, and co-developing technical skills and capacities locally for project continuity. In the ongoing Justice-Centered Healthy Mobilities project, we are in the process of partnering with community organizations to co-produce research to advance health and mobility justice locally. In a transparent look into our progress, our presentation covers how researchers examined their own positionality, developed a research group theory of change, and started to build relationships with partnering organizations. This research seeks to contribute to the growing and much-needed discussion on transportation research and practice that empowers marginalized communities in the U.S. and worldwide.

Citations


Key Words: participatory action research, transportation and health, transportation planning, anti-racist research

WHO GET THE BENEFIT FROM TRANSIT SUBSIDY POLICY? - CASE STUDY: BUSAN, SOUTH KOREA

Abstract ID: 778

Research in Motion (RIM)

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In South Korea, the scale of deficit in public transportation has been increasing. It makes subsidies increase together. Transit users receive benefits from these subsidies while paying taxes to maintain the policy simultaneously. The study analyzed net benefits from the policy, considering both the benefit of the subsidy and the burden based on income brackets and residential regions to examine who are the primary beneficiaries of this policy. This study analyzed Busan metropolitan city, South Korea in 2016 – the latest available year in the National Household Travel Survey (NHTS), the main dataset in this study. In 2016, transit subsidy in Busan was over 372 million dollars.

The benefit was analyzed considering travel cost and fare each passenger pays. The travel cost of each trip was calculated using the travel distance of each trip and the cost per passenger-mile. The tax burden was distributed according to previous research and statistics. Since the financial source of transit subsidy is fuel tax – local and national - and local general tax in South Korea, the tax burden based on income bracket by financial source was analyzed. Then, the burden is distributed by region, considering the distribution of income class by region. In both calculations of benefits and tax burden, NHTS was the main dataset.

According to the analysis, every household pays an average of $280 in taxes per year to maintain this subsidy policy. However, only 33% of households receive the benefits of public transportation subsidies. The remaining 66% of households pay taxes without receiving any benefits because there is no transit user in their households.

Among the 33% of households who are the beneficiaries of transit subsidies, lower-income groups got more net benefits - $749 per year - than the higher-income households - $501 – in 2016 when taking into account both the benefits and the tax burden. However, more explicit differences were observed between residential regions. The benefits of a household in the outer regions were an average of $1,036 per year, while households in the central business district (CBD) received an average of $625 per year.

Households in outer regions receive more benefits because of the fare structure which has weak distance-based fare. The weak distance-based fare let passengers with longer trip get more benefit. Since transit users of the outer region were observed to travel longer distance than people in other region, they get the bigger benefits under the current fare system. However, there is no reason to subsidize more people in other regions than CBD, especially considering the proportion of low-income households was higher in the CBD than in other areas.

In conclusion, this study has two implications. First, the portion of the average paid fare over the average cost per trip is low - about 45%. Raising fares reflecting inflation can help operators reduce deficits on their own. Although public opinion may not be favorable, relying on government subsidies to cover increasing deficits is an unhealthy operating practice in the long term. From the perspective of 66% of households, who do not use transit, they don't have reason to take tax burden to support the deficits. It is more reasonable to impose travel cost to transit users than other people. Second, as examined in this study, the fair distribution of the subsidy benefit by region can be improved by strengthening distance-based in the future. This is also an acceptable way for passengers, as transit users will bear the fare according to the distance traveled.

Citations

MOBILITY OF CARE AND OLDER ADULTS: A BIOGRAPHIC APPROACH TO FAMILY CAREGIVING AND TRAVEL BEHAVIOR

Abstract ID: 861
Research in Motion (RiM)

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Family caregivers play an outsized role in the well-being of older adults facing health and economic vulnerabilities (Rosenbloom 2000). Just as caregiving is an inherently social and relational activity, a caregiver’s travel behaviors should be seen as a negotiated and contested outcome based on their relationship with a care-receiving older adult and other life domains. As the US population ages, the importance of such mobility of eldercare will only increase, yet the travel behavior of caregivers remains acutely under-explored in contemporary transportation research (De Madariaga 2016).

I have conducted a qualitative research project that aims to propose a working theory that covers relational, temporal, and material aspects that shape the everyday mobility of care for family caregivers and receivers. The project builds on a theoretical assumption that there are certain life events in the trajectories of an individual’s caregiving history that forces adaptive response in daily travel patterns. I will use a mobility biography approach to capture these moments of change and examine how social-relational aspects influence them (Lanzendorf 2003). This method has been applied to events like marriage, illness, or residential relocation, but not to the eldercare context (Sattlegger & Rau 2016).

I plan to interview participants recruited with the assistance of local Area Agencies of Aging (AAA) across New York State. As the principal coordinator of local care and welfare services, these agencies provide access to potential study participants (i.e., caregivers) that meet inclusion criteria. The project will also utilize theoretical sampling techniques to capture the widest range of possible data and variance in care experiences in order to engage in theory building.

Overall, my findings can be used to inform transportation policy to provide more timely support and tailored interventions for expanding caregiver population in the US. Furthermore, by connecting the complex web of actor-relationships with policies and geographies behind mobility outcomes for family caregivers, this research contributes to the emerging theme of transportation justice (Karner et al 2020).

Citations


Key Words: mobility of care, transportation justice, aging society, mobility biography

INHERITED BUILT ENVIRONMENTS AND THE PERFORMANCE OF TRANSIT-ORIENTED DEVELOPMENT
Abstract ID: 964
Research in Motion (RiM)
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Planning to encourage transit-supportive built forms such as Transit-Oriented Development (TOD) or Smart Growth is now widespread in North America. The terminology, although not necessarily the plans or the resulting built environments, has become commonplace in planning departments over the last several decades. However, the results have been uneven. The question this research seeks to address is whether built environments created during the automobile era are being successfully retrofitted with Transit-Oriented Development around rail rapid transit stations. An underlying premise of many plans for TOD is that it can be implemented in automobile-oriented environments as a means of creating nodes of density and ridership in a sea of suburbia. However, achieving transit-oriented built forms seems to have been easier in places that were already part of the built up area, and which were served by street railways, between the late 1800s and the mid 1900s. Even in those cases of what Cervero (1998) referred to as “adaptive cities” which featured compact, mixed-use suburban communities concentrated around rail nodes, the results were more substantial in places that had some pre-automobile features of the built environment. Achieving transit transit-oriented built forms seems to have been more difficult in places that were initially built up as post-WWII suburbs, during the era of automobile-oriented urban planning. At the same time, much of North America’s metropolitan areas is comprised of suburban sprawl and substantial change to the overall form of the built environment will be required in order to “retrofit suburbia” (Dunham-Jones and Williamson, 2011).

In order to answer the question, we map the location of 292 rail rapid transit stations opened between 1954 and 2019, and the location of street railways lines, in seven metropolitan areas in Canada. The seven areas are Calgary, Edmonton, Kitchener-Waterloo, Montreal, Ottawa-Gatineau, Toronto, and Vancouver. The 2021 residential population density of the census tract within which each station falls, average block size, and 2021 station boardings at each of the station are calculated as measures of TOD performance. We also review planning documents to identify those locations that are designated as parts of central cities and suburban TODs.

This research is significant in that it links the idea that parts of metropolitan areas are built up during periods in which a particular transportation technology was prevalent (e.g. Newman and Kenworthy, 1999), with current density and rail rapid transit ridership at locations that were first built up either in the street railway era, or the automobile era. Carrying out the research on seven metropolitan areas in one country, but in quite different contexts and of different ages and sizes contributes to findings that are generalizable. This research also contributes to a growing literature (e.g. Renne and Appleyard, 2019; Thomas and Bertolini, 2017) reflecting on the last couple of decades during which an ideal of Transit-Oriented Development has been central to planning practice.

Citations
TRANSPORTATION EQUITY CURRICULUM FOR PLANNING AND ENGINEERING GRADUATE PROGRAMS
Abstract ID: 1035
Research in Motion (RiM)

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A variety of historic and contemporary policies and guidance address equity in planning. The most recent policies originate from the Infrastructure Investment and Jobs Act (IIJA) and Executive Order 14008 “Tackling the Climate Crisis at Home and Abroad”—which created Justice 40. These provide requirements and guidance related to equity for agencies receiving federal funding. The U.S. Department of Transportation’s (U.S. DOT) Equity Action Plan identifies actions the U.S. DOT will take to advance equity in transportation (U.S. Department of Transportation, 2022). To successfully enforce requirements and follow guidance for equity, planning and engineering professionals need an appropriate educational background in this complex and multifaceted aspect of transportation.

Although equity has become a prominent issue in planning and other professions, many professionals still grapple with transitioning from equity as a concept to equity as an actionable practice (Shilon et al., 2020). Educators have the difficult task of ushering the future generation of professionals to a more robust understanding of equity in practice (Lung-Amam et al., 2015). To accomplish this goal, transportation programs should provide students with opportunities to learn about equity through active learning and by engaging with diverse populations in underserved communities (Lung-Amam et al., 2015; Shilon et al., 2020). When planning and engineering professionals have a clear understanding of their roles as advocates for and partners with disadvantaged communities, they are more successful in advancing equity in practice.

This paper will describe the Transportation Equity Curriculum, designed to fill this gap in planning and engineering education. The curriculum was designed for graduate transportation programs (planning, engineering, public policy, etc.), but it is applicable to other disciplines as a model for a comprehensive course that exclusively focuses on equity in decision-making processes.

The curriculum includes a guidance document, workbook of assignments, and other instructional resources including PowerPoint slides. These resources can be used to supplement existing planning and engineering courses in “plug-and-play” fashion or as a full course. Each module has learning objectives, learning outcomes, competencies, evaluations and assessments, and related activities and lecture materials. Modules were piloted in select graduate courses related to planning and engineering and were found to be useful in building student...
understanding of equity and its application to planning practice.

The information presented in the paper will highlight the project team’s motivation for developing an equity-based curriculum, the methodology used to develop the curriculum, the findings from the background research and analysis of existing resources and materials, and results of the pilot applications of select modules. The paper will describe the curriculum structure and its applicability for instructors and emerging and established planning and engineering professionals across the U.S and internationally.

Citations


Key Words: Equity, Transportation, Curriculum

ASSESSING DRIVERS’ PERCEPTIONS OF BIKESHARE USERS
Abstract ID: 1129
Research in Motion (RiM)

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Central Theme: Negative attitudes towards and poor treatment of cyclists by drivers negatively impact the cycling experience. Some recent research has indicated that bikeshare users feel that drivers treat them better than when using their own private bicycles. The present study seeks to further explore this issue by assessing whether drivers have more positive perceptions of bikeshare users then private bike users.

Methodology: A survey conducted on drivers in Mexico City will be used to assess differences in attitudes towards users of the Ecobici bikeshare program and private cyclists. The survey questions were designed to determine the relative perceptions of bikeshare users in the following ways:

1. Directly asking drivers if they prefer to share the road with Ecobici users

2. Asking drivers their opinions about Ecobici users, separately asking the same questions about cyclists more generally, and then comparing the responses.

3. Comparing responses about behavior and attitudes towards cyclists among people that live inside and outside of the Ecobici service area.

Relevance: As cycling is a highly sustainable mode of travel that is often poorly utilized, many urban planners are concerned with increasing the rates of cycling. The danger of a vehicle collision (real or perceived) and acts of aggression from drivers are often considered among the biggest barriers to increased cycling. As such, if bike sharing serves to make drivers more respectful and careful of cyclists, effective bike planning may need to put a heavier focus on bike sharing programs.

Citations

Key Words: bikeshare

THE REMARKABLY LOW COST OF PRIVATE CAR MOBILITY IN THE UNITED STATES
Abstract ID: 1147
Research in Motion (RiM)

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The widespread use of cars* in cities is unsustainable, and many planning efforts aim to reduce urban car dependence. Cars are also expensive. Planners often assume, then, that car dependence is caused by a lack of convenient sustainable mobility alternatives, without considering the possibility that private cars might actually be cheaper than those alternatives.

This research examines this assumption. Our novel contribution is to use the 2017 National Household Travel Survey database of more than 230,000 owned cars to generate a detailed estimate of the full distribution of how much households pay per mile of transport service provided to own and operate their cars. We then use this distribution, along with point estimates of the per-mile cost of transportation alternatives, to answer four questions:

1. Which alternatives are cheaper than owned cars for a given trip?

At each average per-mile cost of alternatives:

2. What fraction of U.S. households would save money by giving up (i.e. shedding) a car?

3. What fraction of U.S. household cars does this represent?

4. What fraction of U.S. household vehicle miles traveled does this represent?

We find that bicycling and walking are the only mobility options that are clearly cheaper than most private cars for individual trips. Even the $0.27 average per-mile cost of public transit – to the rider – is higher than the operating cost of the majority of owned cars in the U.S. For the vast majority of U.S. households, we find that owning and operating their current cars is substantially cheaper than relying on rental cars and mobility services such as ridehailing and shared micromobility. Only households that can use public transit, biking, walking, and their other household cars to make a large share of their trips, then, will find it economical to forego or reduce their car ownership.

Looking at the overall potential for economical car shedding, we find that if the average cost per mile for alternatives were $1.00, approximately 10% of owned cars in the U.S. could be economically shed, but these cars represent only 2.4% of the miles travelled in owned cars today. Economical car shedding rises sharply as the average cost of alternative mobility options drops below $0.50, reaching 50% of owned cars and 33.5% of miles at
$0.39, and 87% of owned cars and 76% of miles at $0.25.

Transportation planners in the U.S. are working hard to develop and implement strategies to reduce car dependence, especially in cities. In practice, however, reducing car dependence has proved to be an elusive goal. Our analysis illuminates an important reason why: cars provide remarkably low-cost mobility. To improve the sustainability of urban transport in the U.S., it is critical to change the relative costs of owned cars and sustainable transport modes. This could be accomplished by increasing the cost of owned cars, reducing the cost of sustainable alternatives, or both.

*Note that "cars" includes light-duty trucks as well.

Citations


Key Words: car ownership, transportation economics, car dependence, pricing policies

RESIDENTIAL LOCATION PREDICTION USING MOBILE FARE PAYMENT DATA OF BUS TRANSIT RIDERS

Abstract ID: 1184

Research in Motion (RiM)

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In recent years, there has been a growing interest in applying geographic data mining tools to predict the demographic profiles of urban/suburban residents. One area of research that has shown promise in this regard involves using user data generated from public transportation fare payment platforms to predict residential location. This innovation not only has practical applications for modeling transit demand but can also be used to infer the demographic characteristics of residents. However, existing methods for predicting residential location rely on the assumption that the first trip of each day occurs near an individual’s probable residential location. This assumption may lead to inaccurate predictions due to the temporal irregularity of work schedules.

To address this limitation, this study employs a location quotient analysis to predict the residential location of transit users based on daily spatiotemporal trip data. The proposed method uses all daily trips rather than just the first trip of the day in the prediction algorithm, which is hypothesized to produce more accurate predictions compared to existing methods. The research uses survey data from a 300-respondent sample along with daily travel data of over 25,000 bus transit riders across four cities in Ohio and Northern Kentucky. The stated home location of the survey respondents is used to validate the prediction results.

Several user-level and trip-level factors are examined to determine variables that can improve the accuracy and overall prediction success rate of existing algorithms. The proposed method is applied to investigate transit-based accessibility to low-paying jobs among bus transit users within different income groups. By using this method, transit planning can identify areas with high concentrations of low-paying jobs that are accessible to bus transit users.

Citations

Key Words: Data

MOBILITY JUSTICE AND SCHOOL DESEGREGATION
Abstract ID: 1185
Research in Motion (RiM)

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Transportation is a critical element of school desegregation schemes. These legal and policy approaches intentionally decouple schools from their neighborhood context to reverse discriminatory housing and land use policies; disrupt the cumulative negative consequences of entrenched segregation; and enable better academic, health, and life outcomes (Johnson, 2018). Successful desegregation requires both the right configuration of policies and programs within schools and the physical pathway and transportation investments to get to and from schools.

However, we have not asked questions or grappled with accessibility in the context of school travel generally or school desegregation programs specifically. Accessibility is not simply a measure of distance, time, or mode of transportation (i.e, car, bus, bike, etc.). Rather, it is a function of the intersecting dynamics of transportation infrastructure with household activity and characteristics, wage and labor policies, housing affordability and stability, land use policies, food security, and school access as well as the physical and social topographies that young people and their families manage daily. Inequities in accessibility persist across race, income, gender, and immigration status, among other characteristics (see e.g., (Blumenberg & Agrawal, 2014; Giuliano, 2003).

The overlapping and compounding realities of school travel in the context of desegregation require transdisciplinary and mixed methods approaches to research and policy making. A mobility justice framework can serve as a bridge to understand school travel and its implications for both transportation and educational equity (Bierbaum et al., 2020). Mobility justice or mobility equity “strives to ensure that everyone—regardless of race, class or any other social identity—is able to access safety, joy and prosperity with dignity while journeying” (Pitter, 2023, p. 6). In this way, mobility justice is not merely a function of transportation or the trip from point A to point B. Rather, it is about a journey, about freedom, and about a guarantee for easy and fearless movement for all groups, particularly those that have been historically marginalized (Pitter, 2023). By looking beyond material movement—how we get from home to school—this framework opens transdisciplinary possibilities to consider the larger systemic configurations across multiple sectors.

This research builds on Bierbaum et al.'s (2020) conceptual foundation to apply a mobility justice framework to the design and implementation of school desegregation programs. This work builds understanding of how desegregation programs and their transportation strategies are actually lived by young people, parents, and educators in relationship to other domains, such as housing affordability, neighborhood conditions, and policing,
In this Research-in-Motion presentation, we share early findings from a mixed methods study about mobility justice in the context of school desegregation program implementation in nine school districts. Relying on open data sets from public transit providers, the National Center for Education Statistics, and the US Census Bureau, we measure equity in public transit accessibility and explore whether public transit enables students to reach receiving schools, whether transit access varies by the kinds of desegregation programs the districts have, and how this access intersects with sociodemographic variation. Qualitatively, we draw on semi-structured interviews with national thought leaders, technical assistance providers, and school district administrators to understand the challenges in implementation and the extent to which these programs articulate with efforts by metropolitan planning organizations, regional and local transit agencies, and affordable housing policies and programs in their areas. Our analysis focuses on the dynamics of housing location and school access and the role transportation infrastructure plays in exacerbating or mitigating challenges of program design and implementation.

Citations


Key Words: school travel, mobility justice, desegregation

WAITING WOMEN: DELAYED, RE-ROUTED, AND CANCELLED TRIPS

Abstract ID: 1204
Research in Motion (RiM)

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The term ‘travel choice’ has been in use for decades with the underlying assumption that people can choose their travel plans, routes and modes. Despite the previous literature on historically value-laden land use and transportation, planners still treat travel choices as if they are made in a social vacuum. (Levy, 2013) When focusing on the trips that are chosen, the opportunity to look at trips that are not chosen is lost. Delayed, re-routed and cancelled trips are part of unmade trips that are affected by social values and expectations, which can disproportionately affect women.

Waiting is at the heart of delayed, re-routed, and cancelled trips. Waiting is a process of negotiation for working mothers who have to juggle duties coming from both private and public spheres. In this research, I focus on the waiting experienced by migrant women working in the hospitality industry. These women typically have low incomes and commute long distances at non-peak times due to shift work. As a result, they spend a significant amount of time waiting. Women, in general, tend to wait more in the current transportation system. Women use
public transportation more, tend to travel during off-peak hours, and engage in trip-chaining to accomplish household activities. (Madariaga, 2013) Long and frequent waiting can result in making fewer trips and the feeling of time shortage, which individuals are forced to manage without institutional attention.

Through in-depth interview, I aim to explore how migrant women who experience waiting in their daily travels when they are without sufficient institutional help, and how this experience shapes them. Making women’s waiting more visible would help to pull individual struggles out to the policy realm. In addition, I aim to explore the different dimensions of waiting. Chronic waiting can be a disruptive and challenging experience for vulnerable populations, but it could also generate the conditions for people to be creative and form strong network of social collaboration, which hints on how they can survive and push back at oppressive institutional measures.

Citations


Key Words: gendered mobility, waiting, public transportation

UNDERSTANDING THE MOTIVATIONS AND PERCEPTIONS OF IMMIGRANTS’ TRAVEL BEHAVIOR IN VIENNA, AUSTRIA: A MIXED-METHODS APPROACH

Abstract ID: 1220
Research in Motion (RiM)

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This research employs mixed-methods research to understand the motivations and underlying factors influencing immigrants travel behavior in Vienna, Austria. Even though Vienna has been lauded for having one of the most efficient and equitable public transit system in the world, the quantitative analysis in this research has shown, that immigrants, particularly from Turkey or former Yugoslavia are much more likely to drive regularly compared to other immigrants and to non-immigrants. This effect is opposite to common literature findings in the US and Europe, which generally find, that immigrants drive less than non-immigrants, particularly for the first few years after arrival. The 21 semi-structured interviews build upon the quantitative analysis and try to comprehensively understand the motivations, attitudes and perceptions behind some immigrants higher tendency to drive. The qualitative interviews have revealed, that the higher likelihood of some immigrants to drive cannot be explained sufficiently through transportation land-use or urban form related factors, but rather through other factors such as attitudes towards governments or the view of the car as a status symbol for economic success and being a "successful" immigrant. Some of the Turkish or former Yugoslavian immigrants view the cheap annual pass price of 365 Euros a year (one of the lowest prices for annual passes in Europe/North America) and the relatively more expensive single fare tickets and weekly passes as an "attempt" of the government to push people to exclusively use public transit. These individuals state that they are not opposed to ride public transit occasionally, but due to the high prices of single or weekly tickets, they exclusively use the car. The qualitative analysis also confirmed the
findings from the quantitative analysis, which revealed that income does not play a significant role in predicting immigrants travel behavior for most immigrants. The interviews also confirm the results of the quantitative analysis, that immigrants, specifically from Turkey or former Yugoslavia are much less likely to bike regularly compared to non-immigrants. The interviews have provided additional information on the possible reasons behind the lower likelihood of biking. Immigrants from Turkey or former Yugoslavia do not view biking as a "adequate" mode for adults to use regularly in daily life. These individuals rather see biking as a leisurely activity for children, but not for adults.

Citations


Key Words: Immigration, Sustainable Transportation, Vienna, Perceptions, Travel Behavior

STRENGTHENING NETWORKS RESILIENCE OF ENERGY AND FUEL SUPPLY AGAINST EXTREME DISASTERS: A COUNTERFACTUAL ANALYSIS OF HURRICANE IAN

Abstract ID: 1248
Research in Motion (RiM)

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Coastal communities in the Southeastern United States are particularly vulnerable to extreme weather and natural disasters, such as hurricanes. Such events can have significant disruptive effects on critical lifeline services, including transportation networks, refuel infrastructure, food supply, etc., which can severely compromise the resilience of communities and the overall well-being of residents. The energy and fuel supply (EFS) infrastructure, which includes both public electric vehicle (EV) charging stations and gas stations, plays a pivotal role in facilitating mobility for coastal residents, thus enhancing their accessibility to other critical resources. The intersection of climate change and transportation electrification poses compounded challenges for the network of EFS services in coastal communities. On the one hand, EFS networks are sensitive to hurricane-induced disturbances, such as strong winds, storm surges, and heavy rains. Disruptions to road connectivity and the power grid can impair the functional operation of EFS infrastructures, as well as the accessibility of residents. On the other hand, the growing uptake of EVs poses futuristic challenges for communities to adapt and transform their EFS network to meet the demand for EV users. For example, during Hurricane Ian, the lack of mobility and charging access for EV drivers raised significant concerns.

Furthermore, both challenges are expected to be amplified in the face of warmer climates and more extensive adoption of electric vehicles. To maintain a resilient supply of energy and fuel supply in the face of such great uncertainty, planners must better understand and prepare for unprecedented situations. Despite the extensive literature on critical infrastructure network resilience during disasters, the EFS infrastructure has not been
adequately discussed in the context. Existing research has primarily focused on the resilience of fuel supply infrastructure and has largely excluded the EV charging network in most studies. Additionally, previous studies have considered resilience primarily from the perspective of the supply chain, with little consideration of the facility-population interaction.

This research aims to address these challenges by deconstructing and suggesting to resilient EFS networks for coastal communities in the United States that can withstand the impact of more intensive hurricanes. The study focuses on the Tampa Bay area during Hurricane Ian as a case study to establish a bipartite network-based framework that depicts the mechanism of how hurricane hazards disrupt the EFS network and enlarge service gaps. This network consists of two types of nodes, refuel stations, and residential areas, linked by proxy transportation connections based on real-time access and network-based distances. This research proposes an agent-based model (ABM) to simulate the refuel behavior of local residents and capture the potential hotspot areas under higher risk of service gaps. The ABM is calibrated and validated using experimental data during Hurricane Ian, including human mobility records and the utilization of EV charging stations and gas stations. Finally, we simulate counterfactual hazard scenarios based on Hurricane Ian to examine the resilience and vulnerabilities of the EFSI network under extreme situations.

This study expands the description and quantification of the resilience of the EFS network during the challenges of uncertain natural disaster situations. The simulations of the EV charging network in comparison to the gas station network across extreme hurricane scenarios reveal potential challenges when transforming from conventional fuel-based transportation to the electrification future. This visionary simulation contributes to infrastructure planning by identifying critical components and vulnerable neighborhoods, which suggests resource distribution in preparation for future hurricanes and recommends adaptation strategies from the perspective of network resilience in the long term.

Citations


Key Words: Fuel supply network, Electric vehicle, Critical infrastructure, Human mobility, Disaster resilience

PUBLIC TRANSPORTATION FOR PUBLIC EQUITY - A HISTORICAL CASE OF TRANSPORTATION DISCRIMINATION IN DETROIT
Abstract ID: 1267
Research in Motion (RiM)

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The denial, downsizing, reduction, defunding, and/or removal of public transportation in Detroit has been historically weaponized against communities of color to limit mobility, especially in suburban contexts. The result has been that public transportation has become a spatially discriminatory practice that has imprinted long-lasting racial boundaries onto the urban geography that exist to this day. Although public transportation planning did not single-handedly create racial divisions in US society the same way redlining or urban renewal has, it nevertheless exacerbated existent spatially discriminatory practices, and further limited the accessibility of Black residents. Despite the racialized role of public transportation planning historically, it is often not considered by planners as contributory to systemic forms of racial exclusion in the built environment. Using the case of the rise and fall of the publicly-owned and poorly planned Detroit Street Railway system in Detroit, Michigan, I argue that disinvestment in public transportation planning has become a tool in the white supremacist arsenal to further reify exclusionary racial boundaries in the post-war city as it underwent social upheaval. This research uses qualitative historical methods to address contemporary urban planning practice with an explicit and normative focus to address racial injustice in the built environment. This paper argues that during the turmoil around suburbanization, planners, politicians, and residents readily identified frequented Black commuting modes, and sought to passively restrict transportation access, which limited connectivity between the city and racially homogenous suburbs.

Citations


Key Words: Transportation, Race, Inequality, Segregation, Detroit

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**THE INFLUENCE OF RIDE-HAILING ON ACCESSIBILITY OF OLDER PEOPLE AFTER THEY STOP DRIVING**

Abstract ID: 34

Poster

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Due to age-related physical and cognitive changes, older drivers are deemed at-risk drivers with an increased risk of crashes. However, older people still prefer to use automobiles with a car-dependent propensity in the United States. When older people reduce or stop driving, their biggest concerns include finding alternative transportation modes. Ride-hailing services, such as Uber and Lyft, have been touted as a potential solution to this issue.
However, there is limited research on how older people use ride-hailing, given the data availability limitations and the recently introduced transportation systems. This paper seeks to explore the factors influencing the use of ride-hailing by older adults and the influence of ride-hailing on the accessibility of older people.

As life expectancy and the aging population increase, the accessibility of older people is a pertinent and important issue. For this reason, this research aims to inform how to create accessible alternative transportation for older people who stop or limit their driving behavior. This paper used the 2018-2019 My Daily Travel Survey conducted by the Chicago Metropolitan Agency for Planning (CMAP) from September 2018 through May 2019, which includes the frequency of ride-hailing and GPS data with the latitude and longitude of home and origin and destination for an individuals’ daily trips. Nine percent of the respondents are older adults (over 55 years old) who have used ride-hailing services in the past week (n=395). This paper estimated an ordered logistic regression model to determine factors influencing ride-hailing adoption and usage. Also, this research used spatial analysis to identify how ride-hailing improves accessibility compared to transit or active transportation by comparing travel time and travel cost between transit or active transportation and ride-hailing as accessibility with the gravity-based measure.

The findings of the study revealed that ride-hailing services have a positive impact on the accessibility of older people. Specifically, the study found that ride-hailing services were used more by the pre-retirement group (ages 55 to 64) than the older age group (over 65 years old), indicating that the pre-retirement group might be more familiar with technology than the older age group. Since the pre-retirement group might still participate in economic activities, the pre-retirement group has distinct travel behavior, including regular commute trips, compared with the older age group. The study also found that ride-hailing services increased the frequency of travel and the range of destinations that older people were able to access.

With these findings, ride-hailing services have the potential to enhance the social inclusion, well-being, and independence of older people. Ride-hailing services help older adults participate in their daily activities by allowing them to attend social events, visit family and friends, access healthcare services, and travel on their own schedule. Ride-hailing services are expected to reduce social isolation and loneliness, which are significant issues for many older adults who no longer drive. The findings highlight the importance of continued investment in ride-hailing services and technology to ensure that ride-hailing services remain accessible and affordable for all users. Thus, this research is expected to help policymakers and service providers take into account the positive impact of ride-hailing services on the accessibility of older people when designing transportation policies and services.

Citations


Key Words: Accessibility, Ride-hailing, Travel behavior, Older Adults
The United Nations World Population Ageing 2019 report indicates that the number of older adults aged 65 or over is expected to double by 2050 globally. This means one in six people in the world will be aged 65 years or over. Older adults’ lifestyles differ compared to younger adults in various facets. Many of the aged population experience declines in their capacity to behave the same as before, while some have the same mental and physical ability as 30-year-olds. Thus, cities should plan to support older adults’ varying travel needs. 2017 National Household Travel Survey (NHTS) Georgia add-on data reveal while 67 percent of persons between the ages of 15 and 65 work, as expected, this number is smaller for those that are 65 and above, only 16 percent. In addition, households with persons aged 15 to 65 account for a higher share of high-income households as compared to those only with persons aged 65 or over. The shift in socioeconomic status and physical abilities of older adults increase the importance of cities having infrastructure and policies that support sustainable travel options for all.

Our research focuses on analyzing the factors that determine older adults’ mode choices and identifies the barriers to sustainable mobility outcomes in Georgia, United States. Existing literature have examined sociodemographic and economic factors such as age, income, employment and lifestyle-related factors such as health and household structure, and found significant associations with older adults’ mobility preferences (Chudyk et al., 2015; Ragland et al., 2019; Shrestha et al., 2017). Studies have also shown that built environments factors matter for travel preferences of older adults (Ozbilen et al., 2022). Older adults in US mostly prefer traveling by privately owned vehicles (Shen et al., 2017).

We use the 2017 NHTS Georgia add-on data for empirical analyses. The dataset includes 4,457 individuals aged 65+, which accounts for 24 percent of the respondents. Based on the ACS estimates, the share of Georgians aged 65 or over was 15 percent in 2017. With this, while the older adults are somewhat over-represented, this provides a large enough sample for empirical analyses. The add-on version of the NHTS dataset has geo-coded locations of every trip origin and destination. This allows us to bring built environment characteristics such as intersection density, sidewalk and transit availability, land use mix, and access to open spaces into our analysis, which are all associated with encouraging sustainable mobility. The shares of trips completed by personal vehicles (either as a driver or passenger), public transit, and walking are 88 percent, 1 percent, and 7 percent, respectively for older adults. The shares are 91 percent, 0.4 percent, and 6 percent for younger individuals. Descriptive analyses show, while the differences are minimal, on average, younger adults drive and take public transit more, whereas older adults walk more. We use discrete choice models to analyze the impacts of various factors (socioeconomic characteristics, trip attributes and built environment) on the mode choice of older adults and compare their determinants with those of younger adults. The analysis findings can be used for creating environments that cater to sustainable mobility options and better health outcomes for older adults.

Citations


Key Words: Aging population, Sustainable mobility, Mode choice, Mobility and health outcomes

THE INFLUENCE OF ROAD NETWORK TOPOLOGY ON STREET FLOODING IN NEW YORK CITY - A SOCIAL MEDIA DATA APPROACH

Abstract ID: 574
Poster

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Urban road networks play a critical role in shaping the spatial structure of an urban area and serve as a vital stormwater infrastructure. Despite its importance, existing literature on urban flooding has primarily focused on large river basin scales and high-magnitude, high-intensity flooding events, while smaller and more frequent street flooding events, which result in higher cumulative costs, have received less attention. Moreover, the relationship between road network topology and urban flooding remains unclear, as does how this relationship varies spatiotemporally.

To address these gaps, this study utilized statistical models to investigate the influence of road network topology on street flooding risks in 557 sewer catchments across New York City (NYC) using a social media data approach. Our hypothesis was that an unreasonable road network leads to sewer backup, manhole overflow issues, and blockages in stormwater underdrains, all of which contribute to street flooding. The research questions were as follows: (1) What is the spatial and temporal distribution of street flooding events in NYC? (2) What are the most important road network topology factors that affect street flooding risk in NYC, and what is their influence? (3) Do the effects of road network topology factors on street flooding risk vary based on different drainage and rainfall types?

To answer these questions, we used 11 road network topology metrics and 11,042 street flooding complaints recorded on the NYC 311 Sewer Complaints platform from 2010 to 2022. However, given the complex nature of street flooding, it was not possible to include all the factors influencing it over time, space, and individuals. Therefore, we used mixed effects models to reduce bias parameter estimation caused by unobserved factors, allowing some unknown parameters to vary across sewer catchments and rainfall events, rather than being fixed in traditional models.

Our findings demonstrated that road network topology played a crucial role in influencing the risk of street flooding. Specifically, road network connectivity significantly impacted the street flooding risk, while the influence of imperviousness was not significant. Decreasing the total road length, number of roads, and sewer catchment area while increasing road network connections, average road width, and the number of intersections could reduce the risk of street flooding. This finding can be explained by how drainage inlet density and flow distance influenced drainage efficiency in urban hydrology, which was consistent with previous studies.

To mitigate street flooding in NYC, we proposed five urban planning suggestions based on road network topology results. These strategies include: (1) reducing the number of dead-end roads, increasing the number of loops in networks, and removing redundant roads to improve road network connectivity; (2) improving the connection between different zones, achieving a more balanced spatial distribution of road intersections, and increasing the number of intersections; (3) decreasing the number of roads while controlling road network topology connectivity;
(4) increasing the average road width while controlling the total road area by merging narrow and redundant roads with adjacent roads to form wider roads; and (5) designing roadside green stormwater infrastructure to increase runoff infiltration capacity and reduce the impervious paving area. These flooding mitigation strategies should be integrated into urban and transportation planning to promote a more resilient, healthy, and sustainable city.

Citations


Key Words: road topology, road connectivity, urban flooding, social media, mixed model

FRAMEWORK FOR AN EQUITABLE AND JUST DEPLOYMENT OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

Abstract ID: 614
Poster

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The use of electric vehicles (EVs) is a crucial component towards achieving a sustainable and low-carbon transportation system. There are various government incentives to encourage their EV adoption by members of the public, including subsidies for EV purchases and charging stations. While there has been a significant shift towards EVs in recent years, the equity and justice issues surrounding this topic have not received enough attention and research. There are notable disparities in EV ownership and charging infrastructure, with EV owners being disproportionately from higher-income households, and charging stations being located further away from lower-income neighborhoods. This raises significant equity concerns regarding the allocation of EV charging infrastructure.

The aim of this paper is to propose a framework for an equitable and just deployment of EV charging infrastructure, that considers various theories of justice in transportation and emphasizes the importance of community engagement and participation in the decision-making process. These theories include Utilitarianism, Libertarianism, Intuitionism, Rawls’ Egalitarianism, and Capability Approaches. While Pereira et al. (2017) believe that the last two theories provide a more just and equitable transportation system, we believe that in the case of EVs, all of these theories should be considered to provide an equitable spatial deployment of EV charging infrastructure. The framework will likely include discussions of accessibility (for individuals and population groups), decision-making among different parties (competing priorities), downsides of EV charging accessibility for neighborhoods, tradeoffs between equity and economic viability, short- vs. long-term effects, urban and rural contexts, etc. By reviewing the general aspects of equity and justice in the EV industry and electric transportation system, and by proposing a framework for the equitable deployment of charging infrastructure, we hope to
contribute to the development of a more just and sustainable transportation system for all.

Citations


Key Words: Electric vehicles, EV charging, Infrastructure planning, Transportation equity, Sustainability

CAN MICROMOBILITY SERVICES ENABLE CAR-LIGHT LIFESTYLES BY REPLACING DRIVING AND FACILITATING PUBLIC TRANSIT

Abstract ID: 627

Poster

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The transportation landscape is rapidly changing with the emergence of micromobility services (i.e., bike-share and scooter-share) (NACTO, 2022). Micromobility can be used as an access and egress mode for public transit (Oeschger et al., 2020), provide mobility options to carless individuals, and enable individuals to become less car-dependent by replacing car trips (Fishman et al., 2013; Fuller et al., 2013). As these systems proliferate across the US, it is important to explore whether micromobility can live up to its potential, especially as an environmentally sustainable mobility option. Keeping that in mind, our primary focus is on the question, “To what extent do micromobility services enable car-light lifestyles by replacing driving and facilitating public transit?”

To answer this question, we used data from the 7-day GPS travel diaries of 919 individuals from 48 cities across the US. With these data, we built individual trip chains by applying a home-to-home-based tour approach (i.e., trip-making begins from home and ends when the traveler returns home on the same day). Using this approach, we extracted 16,563 trip chains for the sample. We subdivided the trip chains into simple (one trip purpose), complex (two to three purposes), and super complex (more than three purposes). Our hypothesis is that micromobility enables individuals to perform complex trip chains without relying entirely on cars.

We find that individuals use their cars at a high rate in complex and super-complex trip chains. This finding aligns with most previous studies on trip chaining. However, the rate of micromobility use is also high in complex and super-complex trip chains. In addition, in complex trip chains, we find that the rate of use of a combination of micromobility, transit, and ridehailing is close to the rate of car use. This suggests that micromobility services in combination with other modes are enabling individuals to perform complex trip chains that prior studies show
were mainly completed with cars. We also find that individuals with low incomes and people of color are using micromobility services at a higher rate and cars at a lower rate in both complex and super-complex trip chains than others, pointing to potential equity benefits of micromobility services.

In our survey, a considerable number of individuals reported that they left their car at home at the beginning of the day due to the availability of micromobility services. To further explore the contribution of micromobility to complex trip chains, we identified the subset of chains in which individuals started the chain using micromobility in isolation or in combination with walking (about 18% of the chains). Among the complex chains in this subset, we found that the rate of micromobility use is approximately four times higher and the rate of car use is approximately nine times lower than the rates found for all trip chains. Among the super complex chains of the subset, the rate of use of a combination of micromobility, transit, and ridehailing is four times higher and the rate of use of the car is five times lower than the rates found for all trip chains. These findings indicate the potential of micromobility services to enable car-light lifestyles for those individuals who make complex trip chains in their daily travel.

Citations


Key Words: Micromobility, Car-light Lifestyles, Trip Chaining, Sustainability, Transportation Equity

MAPPING THE OFF-PEAK: WHERE SHIFT WORKERS LIVE AND WORK, AND THE IMPLICATIONS FOR SUSTAINABLE TRANSPORTATION

Abstract ID: 893

Poster

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This poster explores the spatiality of off-peak commuting in the United States and Canada. Shift workers are at greater risk of vehicular accidents due to the impact of shift work on alertness and circadian rhythm (Gkrizioti et al., 2010; Komada et al., 2013). Due to occupational segregation, these workers are more likely to come from Black, Latino, Indigenous, and immigrant communities (Palm et al., 2023). Providing non-driving commute modes to off-peak commuters is thus a matter of environmental justice, yet little is known about the built environments shift workers live in. This poster closes this gap through a spatial analysis of the residential and worksite location outcomes of shift workers in the United States and Canada.

U.S. data comes from public records on commuting at the block group and tract levels. Canadian data comes from tract level custom tabulations of night and evening shift workers released from the Statistics Canada Research Data Centres. These data are joined with detailed walkability and transit accessibility metrics to examine the following questions:
How do built environment outcomes compare by shift type? How do these differences vary by income, race, and immigration history? Are there mismatches in transit service and concentrations of shift workers of shift work locations? I will answer these questions using choropleth mapping, spatial statistics like Moran’s I and LISA, and spatial regression analyses. The results will help planners identify where gaps in transit service across space and time may be limiting the ability of shift workers to participate in sustainable mobility. In doing so, the poster will help planners advance sustainable transportation in ways that are inclusive of the needs of off-peak shift workers.

Citations


Key Words: sustainable transportation, walkability, accessibility, residential location, shift work

ENVIRONMENTAL JUSTICE IN ROADWAY SAFETY: A STRUCTURAL EQUATION MODEL OF NEIGHBORHOOD DISADVANTAGE, ACTIVE TRANSPORTATION INFRASTRUCTURE, AND NON-MOTORIST CRASHES IN HOUSTON

Abstract ID: 1008
Poster

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Environmental justice has been a great concern in roadway safety research since many cities in the US have reported a higher crash frequency in disadvantaged neighborhoods. This disparity arose partially due to the higher traffic exposure and lack of friendly active transportation infrastructure. However, the mechanism of how neighborhood disadvantage, active transportation infrastructure, and traffic exposure remains unclear in the literature. This research will apply a Structural Equation Modell (SEM) approach to explore the underlying mechanism of disparity in non-motorist crashes in Houston, decipher the influence of neighborhood disadvantage to crash frequency through mediating effect of active transportation and traffic exposure. Confirmatory Factor Analysis (CFA) is used to construct the latent variable to measure the disadvantage index, lack of friendly active transportation infrastructure, and traffic exposure. The results suggest that disadvantaged neighborhoods tend to have less active transportation infrastructure and higher traffic exposure. The results also show that neighborhood disadvantage has significant direct effect and significant indirect effect to non-motorist crashes through lack of active transportation infrastructure and traffic exposure. This research can provide a theorical foundation for urban planners and transportation planners to ensure environmental justice in roadway safety practice by improving the active transportation infrastructure and mitigating the traffic exposure in disadvantaged communities.

Citations


Key Words: Environmental Justice, Roadway Safety, Structural Equation Model, Neighborhood Disadvantage, Active Transportation Infrastructure

TYPOLGY OF MID-LONG-DISTANCE TRAVEL IN THE UNITED STATES
Abstract ID: 1264
Poster

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The mid-long-distance travel (MLDT), defined as a one-way trip in the distance range of 50–600 miles, has begun to gain attention from transportation researchers and policymakers due to its unique characteristics. As long-distance travel (LDT) becomes more frequent and daily travel distance increases, MLDT illustrates a convergence between LDT and daily travel markets. Denoting the short-haul component of long-distance travel (LDT), MLDT took up over 90% of LDT trips and person miles traveled (PMT) in 1995 (U.S. Department of Transportation, Federal Highway Administration, 1995). MLDT contributed to over 20% of total vehicle miles traveled (VMT), while it only took up only less than 3% of total trips. (U.S. Department of Transportation, Federal Highway Administration, 1969–2017). The geography of MLDT often traverses multiple metropolitan areas, posing challenges to metropolitan planning organizations (MPOs) that operate only within their financial and jurisdictional provisions. On the other hand, MLDT fits in the interregional travel context, offering opportunities in the interregional travel market and megaregional transportation planning. Nevertheless, MLDT has not been adequately investigated due to the lack of institutional constraints (National Academies of Sciences, Engineering, and Medicine, 2016). Motivated by the increasing importance of the MLDT market and the current limited understanding of it, this study will investigate the travel behavior of the MLDT market. The study will examine the characteristics of MLDT with comparisons between intraregional travel (less than 50 miles) and the long-haul component of LDT (over 600 miles) using the National Household Travel Survey (NHTS). Specifically, the research questions this study will answer are:

What are the general characteristics of MLDT?
How does MLDT differ from intraregional travel and the long-haul component of LDT?
What are typologies of MLDT?

This study will compare MLDT with intraregional travel and the long-haul component of LDT by descriptive analysis, and the typology will be derived using cluster analysis, such as K-means clustering. The study findings are expected to provide a profile of MLDT and its association with intraregional travel and the long-haul component of LDT markets. In addition, the derived typology is expected to support tailored transportation investment and policy deliberations.
Citations

- Bacon, B., & LaMondia, J. J. (2016). Typology of Travelers Based on Their Annual Intercity Travel Patterns Developed from 2013 Longitudinal Survey of Overnight Travel. Transportation Research Record: Journal of the Transportation Research Board, 2600(1), 12–19. https://doi.org/10.3141/2600-02

Key Words: Mid-long-distance travel, National Household Travel Survey, Cluster analysis
THE IMPACT OF SCHOOL STREETS ON THE USE OF PUBLIC SPACE: AN EVALUATION OF BARCELONA’S PROTEGIM LES ESCOLES PROGRAM

Abstract ID: 20
Individual Paper

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Urban environments around schools are priority spaces for the health and wellbeing of children and their families. School street programs aim to improve the quality of these public spaces through street re-designs, traffic calming measures, the removal of car parking and the addition of street furniture and vegetation. Few urban planning programs undergo rigorous impact assessments, and this research project aims to be one of the first to evaluate the impact of a street calming initiative. We evaluated the impact of a school streets program in Barcelona, Spain that implemented street calming measures in eight streets. Using a pre-post research design with comparable controls, we measure changes in the use of public space by gender and age as a result of the street closures and street calming measures. We use difference in difference regression to generate estimates of program impact. We find that the use of public space increases by over 124% in schools benefiting from the street calming measures with particularly dramatic improvements in streets with full closure. We see 4 times as many children playing and on average 11 more people staying in streets closed to vehicle traffic. Street calming designs reduced vehicle traffic by 35% while full closures reduced traffic by 90% (exceptions being motorcycles). We also are able to detect measurable improvements in air quality, with decreased NO2 levels between 2-7%. Our results indicate that full street closures provide significantly greater improvements than partial closures in use of public space and air quality. In addition to quantifying the impact of this particular school street program, we also aim to illustrate how rigorous impact evaluation may be incorporated into the best practices of city management and urban design.

Citations


Key Words: School Streets, Traffic Calming, Impact Evaluation, Public Space, Children

PLANNING AND URBAN DESIGN LESSONS FROM AN OVERLOOKED NEW DEAL VILLAGE: ELEANOR ROOSEVELT IN SAN JUAN OF PUERTO RICO

Abstract ID: 68
Individual Paper

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Perhaps because of the island’s geographical and political peripherality New Deal projects and experiments in Puerto Rico are seemingly absent in US urban planning and design literature. Eleanor Roosevelt village in San Juan city is one such example and should occupy a significant space in the history of American town planning and international Garden City literature. The development’s significance and contributions are better understood in the company of other well-known New Deal villages such as Greenbelt (MD), Greenhills (OH), and Greendale (WI). The village, originally conceived as an isolated and self-reliant suburb, is now at the center of a metropolitan area of 2.3 million inhabitants and embodies many of the New Deal’s collectivism goals. Yet Eleanor Roosevelt’s layout also reflects a distinct European design tradition, closer to Howard’s first Garden City projects in the UK; whilst integrating local Spanish colonial town elements. Its syncretic urban design reflects Puerto Rico’s historic relationship with colonialism, first under Spanish rule, and later under the US. As a case study in town planning, the village presents an opportunity to examine the influence of urban design on local accessibility by foot, and to examine aggregate travel patterns as compared to the other three sister greenbelt villages. Its organic evolution in over 85 years makes it an ideal case to explore how land-use decisions and physical transformations affect local accessibility levels and streetscapes. This in contrast to the more stable trajectories of the three greentown in the mainland. Eleanor Roosevelt’s design is more akin to traditional urban layouts with a gridded street pattern and centrally located civic spaces and socio-economic functions. Mainland greenbelt villages, which also accommodate centrally located civic spaces and/or social-economic functions, generally register a more sprawled development characterized by large superblocks; dedicated parking areas; cul-de-sacs; and generous pedestrian networks aimed to compensate a less-connected vehicular network. Thus, Eleanor Roosevelt village can be thought as a proxy of new urbanist and everyday neighborhood planning narratives; whilst the Radburn-inspired morphology of greenbelt villages serve as prototypes and proxy of today’s dominant automobile-oriented suburbs and strip malls. These two distinct network designs and related building configurations are at the heart of current discourses and debates on sustainable town planning and design. Given the original self-sufficiency design intent in New Deal communities and the fact that these communities were scaled for pedestrian access, our study relies on the development and comparison of a weighted pedestrian accessibility index to neighborhood activities as a key measure of the relative effectiveness of their designs. Network analytical tools in GIS were implemented on updated POI inventories and a weighting schema based on activity-type was applied. Results and insights highlight Eleanor Roosevelt’s village distinctive design, context, and evolution; a superior pedestrian accessibility level to opportunities; and a notably higher commute walking rate as compared to the other sister New Deal villages. Spatial analysis also reveals the ability of this unique community to accommodate residents of diverse socio-economic levels in sharing common resources and spaces. The village provides lessons for contemporary planning and design of affordable housing in complete neighborhoods especially when geared towards a more culturally and ethnically diverse nation; illuminates on how the role of informality and weak governance of the build-environment in still developing regions of the US yield unexpected trade-offs in relation to accessibility levels, travel behavior, and ensuing environmental impacts; and fills a hole in New Deal greenbelt town literature and the implementation of such principles. It contributes to the international literature on Garden City influence and
permutations in the Americas and informs policy when in relation to achieving long-lasting neighborhood accessibility and social equality.

Citations


Key Words: New Deal, Pedestrian, Accessibility, Design, Neighborhood

MAKING SPACE OF RECUPERATION: OLDER WOMEN SURVIVING, AND THRIVING IN LIVERPOOL 8

Abstract ID: 188
Individual Paper

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Urban scholars have long demonstrated how planners and architects traditionally design cities for men, not for women (Beebeejaun, 2017; Matrix, 1984). Efforts to expose and deconstruct patriarchal built environments, however, primarily focus on young women (from girls at the park to child caring mothers), overlooking age as a factor of spatial discrimination. This paper explores how urban forms ostracise older women, and how these women respond to exclusion by transforming hostile environments into spaces of self-empowerment. Interviews and walkabouts engaged thirty-five women from the age of fifty-five to their eighties who live in Liverpool 8, a deprived district in the UK. Most women continue to carry out professional work while also taking care of loved ones. As they do all this work, which is usually underpaid, if paid at all, older women are forced to navigate streets, services, and homes that were not designed to meet their needs, and which continue to worsen due to disinvestment and manufactured decay.

Older women, however, do not endure exclusion passively. Using space as a source of power, they make their neighbourhood a better place for themselves and others. I found that, collaborating with human and non-human actors, older women engender three kinds of spatial operations. Firstly, they open paths. Older women create informal passageways and generate new boundaries of belonging that spatialise conflicts and solidarities. Secondly, older women reclaim territories. At times they carve out spaces at home to offer refuge to others or to cultivate passions. At other times, reclaimed territories configure collective infrastructures that serve diverse communities. Finally, older women situate futurities. Using their knowledge of space to concretise more just futures, the women create places of healing for people as well as for the planet.

These changes to the built environment are not, strictly speaking, acts of resistance. They emerge from the spatial violence that older women face every day, and constitute one (if not the only) way to cope with the conditions they find themselves in. Rather than intentionally countering injustice or fixing what is broken, the women’s practices engender spaces of what Donna Haraway (2016) calls “partial recuperations:” modest gestures that allow for still possible flourishing, for getting on together while “staying with the trouble.” As calls for reversing spatial
inequities suffuse architectural and planning debates, I suggest that a Just Urban Design (Goh et al. 2022) should elevate spatial recuperations. It should refocus the urgency to repair broken urban worlds, and instead make space for unfinished, scattered, fragile, but nonetheless emancipatory emplacements of care.

Citations


Key Words: Just Urban Design, Gendered Cities, Older Women, Recuperations

CITIZEN PARTICIPATION IN MANAGING PRIVATELY-OWNED PUBLIC SPACES IN SEOUL, SOUTH KOREA

Abstract ID: 190

Individual Paper

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Privately-owned public spaces (POPS) are areas intended for public use, yet owned and maintained by private building owners. In exchange for providing POPS, developers are permitted to construct larger buildings than those that comply with zoning regulations. However, many POPS fail to offer a welcoming environment due to inadequate maintenance and illegal activities that discourage public use (Lee, 2022; Németh, 2009; Németh & Schmidt, 2009). One of the primary causes of these issues in Seoul is the limitations of the existing POPS inspection system (Lee & Kim, 2012). It is difficult to handle all POPS, particularly in districts with many POPS, because each district in Seoul only has one public official taking care of POPS, and they deal with many other unrelated issues. Due to a lack of resources, POPS are only inspected every two years, and only for large buildings. Additionally, building owners sometimes receive prior notification of the inspection date and items to be inspected, allowing them to temporarily prepare for the inspection, negating its effectiveness.

In the study, the potential of citizen participation in POPS inspections is investigated through the following question: Can citizens become effective "watchful eyes" of the city? The majority of POPS inspection items in Seoul are easy enough for non-experts to evaluate, such as the presence of parking lots. If citizens have the basic capacity to perform supplementary POPS audits, problems with the current POPS inspection system of Seoul, such as manpower shortages and long inspection intervals, can be greatly reduced through citizen participation. To analyze the capabilities of participatory inspections, two groups of participants are chosen for empirical analyses: nonprofessional citizens and experts legally qualified for regular POPS inspections. Here, the inspection items are created based on the existing checklist. Subsequently, we measure the level of agreement between the two inspection results by utilizing Vanbelle and Albert's (2009) coefficient, which is an extension of Cohen's kappa. The agreement between two inspection reports is analyzed on a site-by-site and item-by-item basis. Additionally, interviews are conducted with mock inspection participants and building officials.

Previous studies have mainly focused on analyzing the exclusive nature of POPS that control and regulate public access and behavior (Lee, 2022; Németh, 2009; Németh & Schmidt, 2009). On the contrary, we concentrate on the potential of citizens to serve as agents for surveillance and improvement of POPS. Our study will provide useful
insight into the ability of the citizens to improve their urban environment.

Citations


Key Words: Public Space, POPS, Citizen Participation, Maintenance Inspection

EXPLORING URBAN AND CLIMATE CHANGE CHALLENGES FOR RESILIENCE BUILDING: A CASE OF FRANCE COLONY, ISLAMABAD

Abstract ID: 194
Individual Paper

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Islamabad, the federal capital of Pakistan, houses several formal and informal settlements. France Colony is an informal Christian neighborhood in the heart of the city. Unlike the surrounding well-established F-7 sector, which is at higher altitude, safe from floods and other natural disasters, France colony is extremely vulnerable to climate change and urban stresses due to its location on a depressed and marginalized land. With the impending impacts of climate change, expanding urbanization and exponential population growth; the colony will be disproportionately affected compared to the resilient and developed sectors of Islamabad.

In order to identify the reasons behind this widening gulf in socio-economic situation, level of vulnerability and provision of municipal services to the France colony residents and those who live in adjacent upscale localities, this paper attempts to (1) analyze the socio-economic characteristics of the colony residents, (2) find its urban stresses and climate vulnerabilities and (3) provide policy recommendations for its resilience building.

A case study method has been chosen to undertake an in-depth analysis of the locality. Several transect walks were conducted at different times of the day to understand the area and living conditions of its inhabitants. A semi-structured questionnaire was developed to collect qualitative data through interviews and focus group discussions using random, snowball and purposive sampling methods. For quantitative data, close-ended questionnaire was employed to gather data from 200 residents. GIS analysis using ArcGIS software was also carried out to understand the colony’s geographical and urban characteristics.

Findings confirm the presumption that the colony confronts several climatic and urban stresses. However, it also has some positive features. For example, there is a strong social cohesiveness among the residents. They proactively help one another during crises. Similarly, the colony’s mixed and compact urban aspect has facilitated residents get most of the services and utilities within their neighborhood or at a stone throw rather than traveling long distances as quite common for the affluent class living in big bungalows in expansive Islamabad.

Nevertheless, the France Colony faces a plethora of challenges. The residents suffer from a very poor socio-
economic situation. Several stormwater streams passing through the society have never been cleaned. They are heavily choked due to the dumping of solid waste by the residents converting them into death traps for children, especially during heavy rains. Shambolically built houses, narrow streets and dangling electric cables are premonitions for worse to come in case of disasters such as earthquakes and fires. To make matters worse, the municipal authorities also do not have evacuation plans, or emergency services in place to reach out and rescue the vulnerable, i.e., children, the elderly and people with disabilities.

On the basis of the results, the first and foremost recommendation is the cleaning of stormwater channels before each monsoon and lining them for smooth drainage of rainwater. It will save the colony from flooding and prevent loss of lives. The second is the implementation of building codes for new constructions and retrofitting the existing ones so that they can withstand floods and earthquakes. The last but not the least is ensuring disaster readiness by making an evacuation plan and conducting emergency drills.

Citations


Key Words: France colony, climate change, resilience, disasters, GIS analysis

CREATIVE SOCIAL ENGAGEMENT DURING THE COVID PANDEMIC: THE RELATIONSHIP BETWEEN THE NEIGHBORHOOD BUILT ENVIRONMENT, SOCIAL CONTEXT, AND RESIDENT CREATIVE PRACTICES IN PHOENIX, AZ

Abstract ID: 196

Individual Paper

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The COVID-19 pandemic's stay-at-home orders and school/business shutdowns constricted people’s behaviors and social interactions, elevating the role of the neighborhood in social life (Mehta, 2020). Neighborhood transportation infrastructure, including streets, sidewalks, and driveways, provided opportunities for new forms of social and creative engagement (Braus & Morton, 2020; Pfeiffer et al., 2022; Russell & Stenning, 2020). Adults and children used these spaces to cope with the pandemic and its disruptions through chalk drawings, messages, yard signs, and rock art. There are links between neighborhood built environment and creative social engagement. Existing literature suggests that some neighborhood built environments may better cultivate conditions needed for residents’ creative expression of concerns, interests, and experiences. Little is known, however, about the variation in creative social engagement across diverse demographic, geographic, and built environment contexts.

Our research helps to fill this gap by examining how the neighborhood built environment and social context influence people’s engagement in formal and informal creative expression during the COVID-19 pandemic. Our data come from fieldwork, Google Street View, the US Census Bureau, and the Maricopa County Assessor. We use thematic, spatial, and multivariate regression analyses to explore (1) how the use of the neighborhood public realm for creative social engagement differed among three neighborhoods in the city of Phoenix with distinct
demographic, housing market, and transportation conditions, (2) how the contextual differences of these neighborhoods shaped the presence, extent, and kinds of creative social engagement across the pre-pandemic and pandemic periods, and (3) the implications of these trends for residents’ wellbeing and planning practice.

We expect that the design of neighborhood transportation infrastructure may shape creative social engagement. Some potentially influential factors include the presence, size, and connectivity of streets, sidewalks, and driveways. For instance, large sidewalks and/or driveways and less connective street designs (e.g., cul de sac) may provide opportunities for engagement and encourage creative expression. Neighborhoods’ social context may also shape residents’ creative social engagement. Demographics and cultural conditions may result in differences in sense of control and ownership of transportation infrastructure, levels of activism, and objective and perceived vulnerabilities associated with creative social engagement. In addition, neighborhood institutions may shape creative social engagement as they may dictate the design and management of neighborhood public spaces, including streets, sidewalks, and driveways. These built and social dimensions of neighborhoods may interact to shape neighborhood cohesiveness and identity and thus help residents stay connected and engaged, especially during a period of crisis.

Overall, this research helps expand existing theories on the relationships between the neighborhood built environment and social context and creative social engagement during a global pandemic. Our findings offer insights to planners and decision makers on how to cultivate opportunities for creative expression, social cohesiveness, and identity formation across diverse neighborhoods.

Citations


Key Words: Creative social engagement, COVID-19, Neighborhoods, Built environment

THE DESIGN-POLITICS OF EXCLUSIONARY VIBES AND SEGREGATORY WAFTS: SOUNDSCAPES, SMELLSCAPES, AND URBAN DESIGN
Abstract ID: 288
Individual Paper

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Exclusion takes many forms. More than just physical and legal barriers, exclusion encompasses multi-sensory messages conveyed through the built environment. The designers of exclusion, consciously or not, shape places that convey varying degrees of welcome and rebuff. In Information and Exclusion (2011), legal scholar Lior Strahilevitz outlines the concept of exclusionary vibes. He suggests that language, aesthetics and marketing choices can be deliberately combined to facilitate exclusion from a place by signaling—in ways that encode racial, ethnic, gender, and class preferences— which types of persons will fit with community norms and expectations. Building on emerging ideas about “sensory urbanism” and “sensorial citizenship,” this paper takes Strahilevitz’s notion of “vibes” more literally and more critically, exploring how urban soundscapes are also constructed as sites of acoustical contestation. By extension, the manipulation of smells in urban space raises parallel questions about
what might be termed segregatory wafts. More than just descriptive “smelly maps” that reveal the olfactory characteristics of cities or seemingly benign efforts infuse particular places with pleasant commerce-attracting aromas, this paper examines ways that smells, like sounds, may be weaponized as tools to exclude and segregate.

Drawing on multiple examples of recent urban design and development practices, the paper proposes a typology of exclusionary vibes and segregatory wafts to demonstrate how exclusion involves not just policy but design—an unstated but undeniably powerful politics of multi-sensory expression: design-politics. It matters what that power sounds and smells like: How is authority enacted on the landscape in ways that are viscerally sensed?

Empirically, this paper explores this question through examples drawn from three mechanisms that distribute sounds and smells: land use allocation in zoning codes, gentrification of mixed-use neighborhoods, and the siting of religious edifices.

Zoning Guidelines. Historically, zoning has often been described as a technical mechanism for regulating types of land uses and intensities, dividing cities into categories such as industrial, commercial and residential areas, while also regulating the density of building. Encoded in this, however, are assumptions about the distributions of noises and odors, as well as corresponding implications about the desired distribution of people. It matters which people are relegated to being proximate or downwind from noxious smells and sounds they find dangerous or at least unwanted. The paper provides discusses examples from New York City, as well as recent literature tracing the persistent discriminatory effects faced by urban neighborhoods located downwind from industry.

Gentrifying Mixed-Use Neighborhoods. Gentrification is often associated with transformation of residential neighborhoods, but the non-residential components of such places frequently trigger arguments offer clashing cultural practices. The paper draws on contested soundscape examples from Washington’s Shaw neighborhood (new residents seeking to ban outdoor go-go music), as well as smellscape disputes centered on durians (Singapore), curry (Alabama), and sriracha (California).

Religious Edifices. For many of the world’s great religions, places of worship are more than visually imposing edifices; they are also places that communicate with the faithful through broadcast sound (typified by a muezzin’s call to prayer from a minaret or the peals of church bells) and, in some traditions, through wafts of incense that permeate into neighborhoods. Some of these practices signal time (itself a measure of control and authority), but more broadly they can also sensorially assert the privilege of dominant groups over minoritized neighbors whose lives fall within the soundscapes and smellscapes of the majority religion. Conversely, the sounds and smells of non-dominant practices can engender complaints from empowered majorities. The paper provides examples drawn from Indonesia, India, and the United States that document this contestation.

The paper concludes with suggestions for ways to build more inclusionary sensory futures.

Citations

- Jian Kang, “Soundscape in City and Built Environment: Current Developments and Design Potentials,” City and Built Environment 1, no. 1 (2023).

Key Words: Design-Politics, Exclusion, Soundscapes, Smellscapes
PLANNING IN THE AGE OF PANDEMICS: RENEWING SUBURBAN DESIGN

Abstract ID: 327
Individual Paper

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The COVID-19 pandemic has been a critical juncture for the fields of urban planning, urban design, and transportation studies. There has been an increase in active modes of travel such as walking and cycling, especially among people who previously relied on private vehicles and public transportation (Rice, 2020). A renewed dialogue has begun about what post-pandemic cities should look like. The pandemic is touted as an opportunity to rethink neighborhood design and has raised challenging questions for planners and policymakers about the issues of density and mobility (de Rosa & Mannarini, 2021). Some scholars have indicated that lower-density living and active modes of travel, especially walking and cycling, may be best suited to post-COVID-19 cities (Barbarossa, 2020).

The periods of lockdown revealed the critical role of outdoor spaces in everyday life (Porebska et al., 2021). The COVID-19 pandemic has shown that walking outdoors and access to green spaces and amenities support mental and physical well-being (Manns, 2021). In other words, walking within neighborhoods for recreational, fitness, and utilitarian purposes is indispensable in a post-pandemic world. In this vein, this research explores accessibility in the neighborhoods of Abu Dhabi and Dubai and provides tangible lessons drawn from highly accessible cases for use in redesigning future neighborhoods to be more pandemic-resilient. The research examines a diverse set of neighborhood typologies, twenty-seven samples (each sized 1.6 km × 1.6 km), taken from neighborhoods that developed during different growth periods in each city, from 1960s to present.

This research utilizes a mathematical spatial analysis to explore new ways of redesigning suburbs for better pedestrian accessibility. More precisely, the study examines the relationship between accessibility and urban form by integrating morphological mapping and urban network analysis. The Multiple Centrality Assessment (MCA) measure of network analysis is used to both visually and mathematically understand the performance of accessibility in different neighborhood forms. MCA’s metric of Gravity is used to compute accessibility at a local scale (i.e., 400-m for a 5-minute walk, and 800-m for a 10-minute walk). Gravity values represent the number of reachable destinations within a certain search radius in the network when the distance decay effect is taken into consideration.

This investigation is relevant for urban planning and design scholarship because it contributes to the evolving literature that depicts suburbs as a potent ground for innovation, rather than demonizing them. The article provides a new approach to suburban studies that combines morphological mapping, network analysis, and quantified renewed scenarios for future suburban design. Morphological mapping and network analysis diagnose the accessibility levels in a variety of suburban samples. The redesigned or renewed suburban scenarios are then developed based on the lessons and quantified outcomes learned from the highly accessible suburban samples. This approach or process of inquiry can be applied to urban areas worldwide to study the performance of built forms with the aim of retrofitting existing fabrics or redesigning new ones. Including alleys in the analysis is another novelty worthy of recognition. In addition to the typical urban form elements, such as plot density, street network, and intersection density, this study’s analysis incorporated the alley network to reveal its contribution to network accessibility. Alleys are critical to and widely present in the urban fabric, but are often forgotten in analytical studies of urban form. The results of this study address the following research questions: 1) How do neighborhoods with different morphological attributes vary in terms of accessibility? 2) What kinds of planning guidelines can be learned from neighborhood typologies that have high levels of accessibility? To what extent can traditional physical design ideals contribute to a better suburban design for the post-pandemic era?

Citations
• Barbarossa, L. (2020). The post pandemic city: Challenges and opportunities for a non-motorized urban environment. An overview of Italian cases. Sustainability, 12(17), 7172.

Key Words: Urban Form, Urban Network Analysis, Post-Pandemic Planning, Neighborhood Design, Suburban Development

AN EXPLORATORY STUDY OF THE ASSOCIATION OF NEIGHBORHOOD BUILT ENVIRONMENT WITH RESIDENTS’ LEISURELY WALKING BEHAVIORS IN CHINA

Abstract ID: 330
Individual Paper

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Promoting physical activity for all is crucial for both individual health and social sustainability (WHO, 2019). There has been a significant amount of empirical research on moderate-to-high intensity physical activity in Western academia (Wilson et al., 2020). However, due to differences in cultural and population density, discussions on low-to-moderate intensity physical activity are more common in Chinese academia (Wu et al., 2021). Previous studies have shown that replacing one hour of sedentary time with an equivalent amount of light physical activity (LPA) can reduce the risk of four chronic diseases, including diabetes, chronic kidney disease, diverticular disease, and depression, by 2-5% (Cao et al., 2022). Walking, as the most popular low-cost LPA among Chinese people, can effectively lower the incidence of chronic diseases. Current studies on the built environment factors that influence walking mainly focus on utilitarian walking, with discussions on factors such as density, land-use mix, and street connectivity (Liu et al., 2021). The built environment factors that affect leisurely walking have not yet been fully studied in Asia.

Based on the data from the China Health and Nutrition Survey (CHNS) in 2015, we used multilevel linear regression models to study 751 residents from 135 communities in nine provinces in China, exploring associations between five built environment factors closely related to urban design (e.g., the presence of parks, location of fitness centers, presence of bus stops, number of restaurants, and road paving types) and residents’ leisurely walking. The community built environment factors were measured by the subjective reports of community leaders, and residents’ walking behavior and socio-economic attributes were measured by residents’ self-reports. In suburban areas, compared to residents without park within neighborhood, residents in communities with at least one park within neighborhood had a non-weekend walking duration 218.81 minutes longer (p<0.001). In urban areas, compared to residents without park within neighborhood, residents with at least one park within neighborhood had a weekend walking duration 23.58 minutes longer (p<0.001). In suburban areas, compared to residents without bus stops within neighborhood, residents with at least one bus stop within neighborhood had a non-weekend walking duration 53.43 minutes longer (p<0.05). In addition, we also found an interesting result: the paving type of main roads in suburban areas was significantly associated with residents’ walking duration (p<0.01). Compared with residents in neighborhood where the main roads were paved, residents in neighborhoods where the main roads were stone, gravel, or mixed roads surprisingly had a non-weekend walking duration 95.21 minutes longer (p<0.01).
The association between built environment factors and leisurely walking in suburban areas was mainly reflected in non-weekend days, while in urban areas, the association was mainly reflected in weekends. As there is a significant difference in people's work and lifestyle on non-weekend and weekend days, urban design needs to propose spatial policies that differentiate between time and space to further enhance the positive impact of built environments on leisurely walking. In addition, paved roads are more comfortable to walk on than stone roads, gravel roads, or mixed roads, but people tended to spend less time walking on roads with better walking conditions. This may indicate that areas with higher population (development) densities have situations where people and cars compete for space - improving the quality of road paving may benefit vehicles more than pedestrians, increasing the safety hazards of walking and suppressing the duration of walking. Our study confirms the importance of the presence of parks in promoting walking, as previous research has found. However, our study further suggests that it is crucial to pay attention to urban design that enhances the safety of walking in areas with medium to high-density development.

Citations


Key Words: light physical activity, park, pavement, health, suburban

DISORDER OR DISORGANIZATION: WHICH MODERATES STREET WALKABILITY'S RELATIONSHIP TO NEIGHBORHOOD SAFETY?
Abstract ID: 359
Individual Paper

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In recent years, there has been a greater emphasis placed on the walkability of US cities, with multiple cities investing in public transit options and designing pedestrian-friendly streets. These initiatives are pushing Americans back onto the sidewalks of towns and cities, and are changing the way citizens interact with their neighborhood. According to the Environmental Protection Agency, a walkable neighborhood is a neighborhood in which residents can walk to and from different amenities, such as schools, grocery stores, parks, and transit stops, with relative ease. Walkability has a plethora of side-effects, and often changes Americans' behavior, including their behavior around criminality. Some hypothesize that, with more walkable neighborhoods, there will be more "eyes on the street," and, therefore, make it harder to commit crimes. Others, however, argue that walkability also pushes offenders and victims to converge more often, which results in greater opportunities for criminal acts to take place.
Studies have examined walkability’s relationship to crime through the New Urbanism and Environmental Criminology perspectives. However, very few have examined the potential moderating effects of community contexts. Boston is uniquely suited to examine the role of community context in the walkability–crime relationship, given the city’s high level of walkability. This study adds to research on walkability and crime by reviewing two criminological theories, social disorganization theory and broken windows theory, and applying those theories to data provided by the Environmental Protection Agency to measure neighborhood walkability and crime incident data from the Boston Police Department. This research provides urban planners and scholars with a better understanding of community contexts in terms of walkability and safety infrastructure.

This study analyzed whether neighborhood disorder or disorganization moderates street walkability’s relationship to the spatial patterning of five different crime types, predicting the spatial distribution of crime across Boston neighborhood block groups from 2017 through 2019. This study utilized the EPA National Walkability Index, violent (aggravated assault and robbery) and property (larceny, burglary, and motor vehicle theft) crime reports from the Boston Police Department, disorder data from the Boston Area Research Initiative, and sociodemographic information from the U.S. Census Bureau.

Given that the outcomes are count variables of crimes, negative binomial regression models were estimated. The first assessed the average effects of walkability on the spatial distribution of crime, controlling for other predictors of crime. The second model estimated interaction effects between neighborhood walkability and disorder, both social and physical. Two interactive terms were estimated in this model to account for both social and physical disorder. Both terms were multiplied, separately, by the Neighborhood Walkability Index. The third model estimated interaction effects between walkability and social disorganization indicators on the spatial patterning of crimes in Boston. Three interaction terms were estimated by multiplying the walkability index by three social disorganization indicators. Each social disorganization indicator’s interaction effects were estimated separately, in three different equations.

Findings from this study support previous research findings in that neighborhood walkability had a robust positive relationship to all crime types, all things considered. On one hand, social disorder had a significant moderating effect on walkability’s spatial relationships to violent and property crime; on the other hand, physical disorder did not moderate the walkability–crime relationship at all. Disorganization also mattered, especially with regards to poverty and residential stability: Poverty exhibited a significant moderating effect on walkability’s relationship to all violent crime types, as well as walkability’s relationship to burglaries and motor vehicle thefts. Residential stability moderated walkability’s relationship to aggravated assaults and larcenies. City streets can be walkable and safe if urban planners work with public officials to maximize the benefits of walkability and minimize the negative effects of neighborhood permeability.

Citations


Key Words: crime, disorder, disorganization, walkability
DEMYSTIFYING CONTEMPORARY “COMMUNITY DESIGN”: ANALYZING THE FORM(S) OF COMMUNITY DESIGN CENTER SERVICES AND THEIR VARIATION

Abstract ID: 384
Individual Paper

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The main objective of this research is to examine the types of services offered by community design centers (CDCs) and how they vary in relationship to relevant organizational characteristics. Previous research on community design centers has noted that the term “community design” lacks a clear definition (Sanoff 2006). While the first CDCs in the 1960s mainly worked to provide planning and architectural design assistance to low-income and disenfranchised populations, the range of services provided by CDCs has since expanded. Over that same time period, the meaning of “community design” has become broader (Blake 2014; Nordhaus 2001). To address the ambiguity of its definition and relevant practices, researchers have attempted to define and redefine the concept of community design through different approaches (e.g., Comerio 1984; Blake 2014; Lee 2023).

This study seeks to contribute to our understanding of community design by investigating the projects and practices of the organizations created to carry out this work, namely community design centers. I come up with three research questions to better comprehend the form(s) of community design practices today. First, what types of services do contemporary CDCs provide, and how do they engage the built environments in their work? Secondly, what geographical scale(s) does the design work of CDCs aim to enhance? Finally, are there any differences among CDCs regarding the types of services they provide and the geographic scales they focus on, and what factors explain these variations based on their organizational characteristics?

Using the list of CDCs from the Association of Collegiate Schools of Architecture’s (ACSA) “Community Design Directory” published in 2014, I identified 133 active CDCs with websites showcasing their projects and activities. Each CDC’s service type was categorized by its type and geographical scale coded by the author. I also analyzed their variations depending on CDCs’ organizational characteristics, such as organization type, establishment year, and location. The initial analysis revealed that more than 30% of CDCs do not present services that involve design or physical interventions on the website as their featured projects. Interviews with some CDC directors elicited that they consider convening design charrettes or facilitating public meetings as community design in itself, and there were CDCs that have solely worked on the process design. Furthermore, the findings of this study showed that the plot/block-scale project was the most common geographical scale at which CDCs provide services, primarily related to affordable and energy-efficient housing. The next most common forms were street- and neighborhood-scale design plans. Less than 30% of CDCs had worked on a city/regional-scale design project, and most of them were university-affiliated organizations.

The findings of this research have two significant implications for future studies on community design and planning. First, the study highlights that community design is not limited to the production of physical environments or design plans. Instead, it encompasses the design process itself and training activities that equip community members with relevant knowledge and skills to manage their physical environments. Secondly, the research reveals that CDCs exhibit a greater interest in plot/block-scale design projects, indicating a weaker emphasis on design projects at larger geographical scales. Although the study did not use the count of projects in each scale, it still suggests that CDCs’ organizational-level interests tend to lean more toward a small-scale project, based on the current list of CDCs. This raises the question of why CDCs’ interest, particularly among independent nonprofits, in the neighborhood- and city-scale design is low and requires further investigation.

Citations


Key Words: community design, community design center, advocacy planning, design service

REPURPOSING COLONIALISM: THE POLITICS OF WORLD HERITAGE PRODUCTION IN POSTCOLONIAL NATION-STATES
Abstract ID: 397
Individual Paper

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At the global level, the institutionalization of heritage through UNESCO’s World Heritage Program, has resulted in the emergence of a global platform for nation-building through heritage. Given this, this paper explores the surprising ways that some nation-states have capitalized on their colonial heritage when seeking recognition through this Program. Heritage is about the present and how interpretations of the past are used in and for present-day purposes. As a form of material culture, the built environment as heritage serves various facets of nation-building: it provides a physical representation of identity, conveys continuity with the past, and fosters a sense of belonging – or even exclusion. Although World Heritage was conceptualized as universal, nation-states are the real locus of power instrumentalizing the inscription of World Heritage Sites towards agendas of nation-building. While some World Heritage sites are monuments or archeological parks, many of the sites on the World Heritage List are cities or entire urban neighborhoods.

Since the turn of the 21st-century, developing nations in South and Southeast Asia have increasingly sought inscription of their heritage sites to UNESCO’s World Heritage List for global recognition, political legitimization, or economic reasons. Despite a painful history of decolonization coupled with rising nationalist sentiments in the region, many nations continue to seek World Heritage status for their colonial heritage, raising the question: what opportunities does the inscription of colonial-era built heritage offer to post-colonial nation-states?

In this paper, I probe diverging approaches to postcolonial nation-building using colonial-era heritage through an in-depth consideration of two comprehensive case studies – the ‘Singapore Botanic Gardens’ (Singapore), and the ‘Victorian Gothic and Art Deco ensembles of Mumbai’ (India). Using a version of Mukhiya’s (2010) ‘N of one plus some approach’ – here an N of two plus some approach—I deploy ‘Old town of Galle and its fortifications’ (Sri Lanka), ‘Georgetown and Malacca Historic Cities of the Straits of Malacca’ (Malaysia), and ‘Historic City of Ahmedabad’ (India) as secondary or assisting cases to add richness and inspire ways to question the primary cases by situating them in relation to others. Drawing from 6 months of fieldwork and several years of professional experience in the region, I use evidence from semi-structured interviews, observational data, nomination dossier documents, maps, and plans, to explore a typology of uses of colonial-era heritage in constructing the postcolonial nation.

While all forms of heritage are instrumentalized in furthering nation-building agendas, I argue that colonial-era heritage has a very distinct set of uses for nation-building in postcolonial contexts. I propose three types of uses that are the specific domain of colonial-era heritage: signaling modernity, masking ethno-racial politics, and conserving elitism. First, colonial-era heritage is repurposed to construct a contemporary national identity that is global, modern, and indigenous. Second, the conservation of colonial-era heritage is used to navigate ethno-racial
dynamics in multicultural nation-states. Finally, the production of World Heritage through the conservation of colonial-era heritage engages colonial class legacies and serves the agendas of elite society.

This paper stems from ongoing dissertation research that aims to build new geographies of theory on postcolonial nation-building. By unpacking the socio-political and economic brokering performed through these sites, this paper explores the role of colonial-era heritage in negotiating conflict in contemporary societies mired in ethno-racial politics.

Citations


Key Words: urban heritage, identity politics, nation-building, postcolonialism, conservation

UNDERSTANDING CHILDREN’S BEHAVIORS ON PUBLIC STREETS FOR CHILD-FRIENDLY CITIES

Abstract ID: 452
Individual Paper

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The importance of urban streets has been widely recognized for children’s physical activities and social interactions (Brown et al., 2019). However, rapid urbanization has marginalized the role of streets in recent cities. To reclaim public streets for children, more understanding of how children use their streets can help urban planners create streets that are more livable and comfortable. Previous studies have relied on travel diaries, surveys, or labor-intensive observations to identify children’s behaviors on streets, focusing on large urban scales (Sallis et al., 2018; Mayer et al., 2019), rather than individual streets. To overcome time-consuming observations, urban researchers have utilized computer vision techniques to identify the behaviors of pedestrians (Li et al., 2022). Since previous studies usually have focused on small sample sizes and costly observations, vision-based techniques can help urban researchers investigate the behaviors of large groups of children on public streets automatically and continuously.

This study utilizes computer vision techniques to automatically examine children’s behaviors on urban streets through thousands of children’s pedestrian trajectories. This study comprises three main processes: 1) collecting the trajectories of children on streets in urban surveillance systems, 2) analyzing the behaviors of children using pedestrian trajectories, and 3) identifying relationships between children’s behaviors and street environments. The contribution of this paper is threefold. First, we propose methodological contributions to automatically and stably collect and analyze children’s behaviors on urban streets. Second, we identify the behaviors of children on streets under varying conditions such as date and time. Third, we verify the influence of street environments on children’s behaviors.

For our first process, we propose a novel approach to efficiently collect trajectories from multiple pedestrians in urban surveillance systems using Deep simple online real-time tracking (Deep SORT) and trajectory reconstruction.
We validate our approach with an actual testbed, and the results show that our methods successfully improve the performance of the existing tracking-by-detection model by reducing practical errors. Thus, we collect children’s trajectories on streets using the proposed methods.

In the second process, we analyze children’s behaviors using the collected children’s trajectories. We extract behavior features of children (e.g., direction, speed, and acceleration) from the trajectories and classify their behaviors using clustering analysis. Our results identify five children’s behaviors on urban streets: walking, staying, running, accelerating, and decelerating. Furthermore, the results discover detailed changes in children’s behaviors and local events on streets that may not be apparent in their geographic characteristics. For example, our results determine the time for outdoor activities of preschool children or informal play time on residential streets.

For the final process, we explore the relationships between children’s behaviors and street environments. We aggregate the children’s behaviors within 1-meter grid and perform correlation analysis with the street environments (e.g. pavement, shade, greenery, etc.). Our findings show that the children’s use of streets varies in each street and street environments significantly influence children’s behaviors.

The preliminary results demonstrate the potential of computer vision techniques to examine children’s behaviors on urban streets in urban surveillance systems. We expect that our vision-based behavior analysis will overcome previous time-consuming works and broaden understanding of how children use urban streets by automatically and sufficiently illustrating children’s behaviors. Continuous trajectory collection and analysis show that children still use their streets for outdoor activities and their behaviors differ depending on the physical environments of streets. In addition, our study uses only a single camera, which is deployed in many urban surveillance systems, making it easier to utilize its methods in numerous urban streets. We believe that our study is helpful for urban planners to understand children’s behaviors on urban streets and create urban streets to be more child-friendly.

Citations


Key Words: Children, Behavior, Street, Computer vision, Child-friendly cities

TOWARDS SOUNDSCAPE DIVERSITY - A COMPARISON OF STAKEHOLDER PERCEPTIONS AND STRUCTURAL DESIGN ELEMENTS BETWEEN A LOCALIZED AND A REVITALIZED MARKET IN HONG KONG

Abstract ID: 454
Individual Paper

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In the context of cultural heritage in Hong Kong, the intangible dimension of urban cultural heritage has recently received attention. Environmental sensory perception can improve the quality of user experiences and create an
attachment between people and cultural places. In Hong Kong, wet markets are of particular interest. They are traditional markets that sell fresh meat, vegetables, dried produce, and other perishable goods, which have become destinations for tourists to experience “the real Hong Kong.” As part of the Revitalizing Historic Buildings Through Partnership Scheme of the Hong Kong Government, the Central Market reopened in 2020 with refurbishment. However, the revitalization process focused on structural building support and used new interior design and facade materials to preserve the architectural character. However, it paid little attention to the cultural narrative from a sensory perspective. Soundscape is the acoustic environment that people perceive and is an essential aspect of sensory cultural heritage. In the current research, SDI (soundscape diversity index) is often applied to natural environments (such as urban parks) but rarely to non-green spaces. The functions, structures, and features of the revitalized market space seem more diverse, but it is unclear if it remains the same from a sensory perspective. Our case study focuses on two markets in Hong Kong, Shek Kip Mei, and Central Market. The former is a “localized” and traditional market, while the latter is a “revitalized” market. The present study is part of a larger project investigating specific places of intangible cultural heritage in Hong Kong and abroad. Several functional locations inside the two buildings are charted, with on-site observation and interviews, field recording, spectrogram analysis, SDI calculation, and other methods for data analysis. We conduct comparative analyses of sound sources and the soundscape as a whole of the two markets (especially the results of SDI), and the spatial design elements of a traditional market and a market after revitalization. By triangulating the analysis of soundscape and interviews, we have found how the soundscape changes affect the feelings of stall vendors, customers, tourists, cleaners, and other personnel, who all are stakeholders of the places of cultural heritage. Even though the revitalized market might have richer design elements and more eventful spaces, we wonder if the diversity of the soundscape is also increasing and if it is compatible with the traditional functions of the wet market. Ultimately, we will explore the inner feelings and expectations of patrons and make suggestions for revitalization design that integrates the perspective of soundscape.

Citations


Key Words: Soundscape, SDI, urban design

RELATIONSHIP BETWEEN SPATIAL FORM, FUNCTIONAL DISTRIBUTION AND VITALITY OF RAILWAY STATION AREAS UNDER STATION-CITY SYNERGETIC DEVELOPMENT: A CASE STUDY OF 9 SPECIAL-GRADE STATIONS IN CHINA

Abstract ID: 679
Individual Paper

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This article selects nine special-class railway stations in China as research objects and explores the correlation between vitality and spatial form and functional distribution of railway station areas under the guidance of station-city synthetic development. Firstly, the article elaborates on the important role of railway stations as urban gateways from the perspective of station-city synergy. With the continuous improvement of urban planning and
acceleration of urbanization, railway stations are not only important transportation hubs, but also important components of urban functions. Under the guidance of station-city synergy, the reasonable layout of spatial form and functional distribution around railway stations can promote the vitality and economic development of railway station areas. Secondly, the article measures and analyzes the spatial form and functional distribution around nine special-class stations and finds that there are significant differences in the spatial form and functional distribution around railway stations. For example, in urban developed areas such as Beijing South Station and Guangzhou South Station, the distribution of commercial and residential functions is relatively balanced, and the height and volume ratio of buildings around the station are also high. Finally, the article explores the correlation between spatial form, functional distribution, and vitality around railway stations. Through data statistics and analysis, the article finds that the spatial form and functional distribution around railway stations have a significant impact on regional vitality. In areas with balanced functional distribution, appropriate building height and volume ratio around railway stations, the vitality level is relatively high, and economic development is more prosperous. Conversely, in areas with uneven functional distribution, low building height, and volume ratio, the vitality level is low, and economic development is relatively lagging. The research results of this article provide a reference and basis for the spatial planning and urban renewal of railway station areas, and also provide new ideas and methods for the correlation research between spatial form, functional distribution, and regional vitality around railway stations.

Citations


Key Words: street function, street vitality, Spatial Form, Railway stations, Station-city synergy

HOW TO PLAN FOR THE POST-COVID WATERFRONT RETAIL DEVELOPMENT? LEARNING FROM GLOBAL WATERFRONT SHOPPING CENTRES

Abstract ID: 737
Individual Paper

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Shopping centre development has acted as a key force stimulating waterfront regeneration in cities since the late 20th century, attracting investment and jobs, facilitating real estate development, and fostering vivid walking space and urban experience. The Covid-19 pandemic generally shocked all forms of physical shopping space, while it also brought a unique opportunity for waterfront shopping. Open urban space – particularly the waterfront – was considered a healthy, safe, and desirable ‘oasis’ when the pandemic swept through many cities (Florida et al., 2021). In this way, waterfront shopping centre development may lead the post-Covid urban revitalisation.

Existing studies investigated the type, planning, finance, and socioeconomic impact of waterfront regeneration (Dovey, 2005; Gordon, 1997; Hoyle, 2000), with a focus on the practices from the late 1980s to 2000s. Examinations of shopping centres have been more advanced, with a recent study comprehensively exploring the types and urban capacities of emerging shopping morphologies (Rao & Dovey, 2021). However, no systematic research of the typomorphology and urbanity of contemporary waterfront shopping centres has been conducted.
Our research goals are threefold: to identify the key morphological types of current waterfront shopping centres, to explore the recombination of these key retail types, and to interrogate the degree to which emerging waterfront shopping centres enhance or reduce urban public life.

We applied a typomorphology of waterfront shopping centres around the globe. Our examples embody 48 shopping centres in 33 cities across the United States, United Kingdoms, China, Japan, and Australia. Typomorphology conceives of the ‘type’ as a ‘diagram’ or ‘pattern’ that shows how some places work in general without suppressing their difference. We mapped shopping centres by extracting 1) anchor or general ‘shops’, 2) vehicular or pedestrian traffic ‘flows’, and 3) car, pedestrian, and green ‘space’ from satellite images centred on shopping morphologies at the walkable scale of one-by-one square kilometre. We analysed the spatial relations between the shopping centre and water, and identified the morphological type of shopping centre.

The preliminary analysis reveals three basic spatial relations between the shopping centre and waterfront: ‘perpendicular’ to the waterfront (e.g., Harbour City in Hong Kong), ‘parallel’ to the waterfront (e.g., Brookfield Place in New York City), and ‘occupying’ the waterway (e.g., Canary Wharf in London), accounting for 33%, 25%, and 13% of the total examples, respectively. The remaining 29% of the shopping centre examples embody synergistic shopping-water spatial relations. Different types of waterfront shopping morphologies present various capacities for fostering social encounters. The interface between ‘perpendicular’ and water is mostly park or plaza, enabling large gatherings or events. The interface between ‘parallel’ and water is often path or promenade, suitable for walking and street activities. The interface between ‘occupying’ and water is much more mixed, underpinning a wider range of activities. The shopping morphology also matters as it mediates the ways people access the waterfront. Mutated shopping malls – where a sense of open street or waterfront is curated under intricate private control – are prevalent in the selected shopping centre examples, posing a threat to authentic waterfront public space and life. These findings could inspire a range of socio-spatial strategies for the post-Covid waterfront retail (re)development and timely implications for retail planning to tackle increasingly sophisticated privatisation of waterfront.

Citations


Key Words: Waterfront, Shopping Centre, Retail Development, Typomorphology, Post-Covid

CHARACTERISTICS AND FORMATION MECHANISM OF DIVIDED SPACE IN HIGH-DENSITY METROPOLITAN AREA: EVIDENCE FROM SHANGHAI CHINA

Abstract ID: 743
Individual Paper

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The coconstantaneous aging and low fertility are serious issue in metropolitan areas in China, paralleling with the statistical urbanization rate has reached 63%. Various social problems caused by the population also emerge from the spatial phenomena, while the demographic structure changes to reshape the urban spatial fabric (USF). No consensus has been drawn on the better way between the homogeneous agglomeration and the integration of diverse populations, so as to conditions and degrees with positive or negative effects. Meanwhile, the discussion of whether the spatial planning can provide an effective way to solve corresponding social problems has not been completed in China. One of the most important scientific issues in the Chinese urban research and planning society is that, whether there is “space division” in mega-cities, as well as its characteristics and forming reason. This paper selected the 600 square kilometers built-up area within the A20 expressway loop in Shanghai central area as the study scope. Firstly, with the semi-supervised classification method, it identifies and classifies all the residential quarters from the satellite image map, including gated community and apartments. Secondly, based on complex network analysis, a neighborhood matrix is created according to geographical proximity, type of residential quarters, nearest public green space, and basic educational facilities. Then, this study identifies the complex network community with dual characteristics of geographical space and social space, through forming the residential space network (RSN) focusing on the communication activities of residents. Thirdly, we verify the community identification results and spatial divided characteristics by housing prices and social media data, by selecting the typical residential space community (RSC) with complex and divided spatial boundaries, and summarize the micro characteristics through site questionnaires and interviews. Finally, this study compares subjective cognition with objective data division results to reveal consistency and differences of “regional identity” outcomes, based on the analysis of land use, spatial fabric and facility distribution in typical RSC. The results show that: The scale of the RSC of RSN in the central area of Shanghai is generally large, while that in the marginal areas is relatively small. Historical districts, workers' new villages and block based living quarters are more likely to connect with the surrounding residential areas, while the commercial gated residential areas are relatively independent and have little contact with the surrounding. However, public green space, subway stations, commercial facilities and service often play a better spatial integration role for their surrounding areas. This study points out that: First, it is a fundamental mechanism in the formation of “regional identity” of RSC, which allocates primary and secondary schools according to the population size of residential areas and strictly according to the rules of enrolment in the nearest school district in Shanghai Municipal-government. Second, primary schools play an important role in the promotion of students to higher level and higher quality schools to achieve grade leapfrogging, which leads to the spatial division between different school districts. Third, the spatial division between school districts is further characterized by housing prices, residential population density and the development model of public commercial facilities. Accordingly, municipal construction projects and spatial regulation means, such as urban expressways, administrative boundaries and division of regulation planning units, constantly strengthen and reinforce the phenomenon of spatial division. This research reveals the reality of space division of RSC in urban RSN with complex network analysis, and analyses the spatial division characteristics of RSC. Meanwhile, it preliminarily reveals the causes of the space division of the RSC, through the measurement and verification methods. It provides theoretical and methodological support for understanding the formation of urban RSF and for proposing planning countermeasures in China.

Citations

Key Words: Residential space fabric (RSF), Divided space, Residential space community (RSC), Complex network analysis, Shanghai

COGNITION OF BUILDING FACADES ALONG THE STREET IN HISTORIC DISTRICT FROM PUBLIC AND PROFESSIONAL PERSPECTIVE: A CASE STUDY OF HENGFU HISTORIC DISTRICT IN SHANGHAI, CHINA
Abstract ID: 767
Individual Paper

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Background: Historic districts are considered to represent the history of the city, so there have been many regenerations in these areas. Among the regenerations, building facades along the street are mainly focused on as they are the component that people most frequently experience in the district. However, building facade regenerations in historic districts are now mostly conducted in terms of experts’ perception. This leads to two issues. First, people’s experience is an information-processing process known as cognitive process, which includes not only perception but also long-lasting memory that induces their revisit. Second, experts are generally more sensitive to aesthetic forms than the public, especially of buildings along the street, so it is necessary to consider cognition of both for building facades regeneration.

Objectives: To study the public and professional cognitive information change during the process from perception to memory when appreciating building facades along the street in historic district.

Data sources and methods: The researcher set Hengfu Historic District as an example. First, we intercepted the street sections in all blocks of this district and obtained one to two photos for each section, and then selected 30 photos that basically represent all the street facade in the district to form a photo collection. Afterwards, we designed an experiment including Phase of perception and Phase of memory for the photo collection: (a) Phase of perception: The researchers showed the subjects a photo of street. The subjects were asked to describe the elements they noticed in building facade along the street and indicate the visual features of elements (such as shape, color, height, etc.); (b) Phase of memory: Five minutes after the end of the first session, the subjects were asked to indicate the elements and the visual features that they remembered. The two phases went for all photos. In terms of choosing subjects, since residents’ daily experiences can interfere with memory, the study population was designated as non-residents. Moreover, differences in cognitive ability among different age groups also affect perception and memory, so the study population was further limited to young adults between the ages of 20 and 28 with generally good cognitive ability. A total of 280 subjects were selected, half of whom were professionals and half were non-professionals. The complete experiments were recorded and converted into text manuscripts, which were subsequently used as the basis for word frequency and text encoding analyses. Statistical analysis of segmentation and word frequency was performed on the basis of the text manuscript of the audio data.

Results: The elements of building facades that subjects described and memorized can be organized in nine groups: building height, building color, building function, building material, store sign color, store sign shape, door and window color, and door and window shape. The word frequency shows that professionals are more inclined to indicate building height while the non-professionals tend to pay more attention to building color. Through the process from perception to memory, more information of building color loses for non-professionals and the both types of people can maintain the information of building height well.

Citations

Key Words: Building Facade, Street, Cognition

BEHIND THE WATERFRONT: THE MASKING OF INEQUITIES IN THE RECONSTRUCTION OF MEDITERRANEAN PORT CITIES
Abstract ID: 805
Individual Paper

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Mediterranean urban waterfronts have long been landscapes of innovation and emerging technologies. The introduction of new maritime infrastructures (e.g., containers, cranes, cargo ships), the transition from industrial to post-industrial settings (e.g., waterfront promenades, museums, recreation facilities), and the emergence of new building typologies (e.g., high-rises, cruise terminals, iconic architecture landmarks) have radically modified the physical and social apparatus of port-adjacent neighborhoods, their functionality, and, most importantly, their relation to neighboring urban environments often left to languish in the shadow of new development (Hein & Schubert, 2021). While coastal cities have often looked at their shorelines to reimage themselves, they have repeatedly fallen into the lure of erecting grandiose façades à la Haussmann along thin lines of development wrought upon the existing built fabric, with the intention of masking problematic and unresolved aspects of their urban past deemed unworthy of being seen (Freemark, Bliss & Vale, 2021; Harvey, 1989). This approach has defined the evolution of urban spaces between land and water since the rise of nation-states in the mid-19th-century by creating master-planned visual and socio-economic hierarchies that often emerged out of an exclusionary logic, thereby reinforcing forms of marginalization and enduring inequities.

While the growing literature on globalization and port cities has deliberately spotlighted the outward behavior and water-based connections of port cities by focusing on cosmopolitanism, global trade, and international infrastructures (Favero, Serruys & Sugiura, 2019), this investigative lens has come to the detriment of a more granular understanding of how the built fabric, its social composition, and its economic forces shape the spaces behind urban waterfronts. However, this effort is often hindered by the complex choreography of institutional actors involved in reshaping water-facing urban areas and by the paucity of longitudinal spatial datasets in local archives. More generally, an in-depth evaluation of the spatial inheritance of social exclusion in behind-waterfront spaces through the lenses of design politics, modernization, and enduring urban poverty remains to be carried through (Savage, 2021).

By constructing a broader theoretical framework on forms of enduring inequities in behind-waterfront spaces of Mediterranean port cities, this paper advances a spatial-humanities investigation of Naples’ water-facing neighborhoods. This research employs data-driven urban morphology analyses of historical maps, administrative documents on compulsory acquisitions, and longitudinal socio-economic records from unpublished primary sources stored in Naples’ National Archives to shedding light on the spatial inheritance of social exclusion in behind-waterfront spaces. Research findings provide empirical evidence on how urban design practices initiated in the late 19th century and continued till the end of the 20th century contributed to the consolidation of pockets of urban poverty and disinvestment behind State-mandated Haussmannian grandeur.

In conclusion, this research provides a novel understanding of deeply rooted exclusionary processes behind urban waterfronts. Rather than focusing on the relationship between cities and global shipping networks and on the
processes of waterfront regeneration in post-industrial settings, it tests a methodological approach to assess in
time and space forms of inequities mediated by the the built environment. Through the case study of the city of
Naples, this work provides empirical evidence of how urban reconstruction plans à la Haussmann masked and
isolated vulnerable communities and neighborhoods with precarious living conditions, and it raises potent
questions about the long-term effects of grand urban design gestures in port cities.

Citations

  Blackwell.
- Favero, G., Serruys, M.-W., & Sugiura, M. (Eds.). (2019). The urban logistic network: Cities, transport and
  distribution in Europe from the middle ages to modern times. Palgrave Macmillan.
  https://doi.org/10.1007/978-3-030-27599-0
  Press.

Key Words: Exclusion, Inequities, Mediterranean, Port City, Haussmann

FLEXIBILITY OF URBAN SPACES: EXAMINING TWO CITIES TO BUILD A CASE FOR NEW MODES OF ADAPTABLE
REGULATION
Abstract ID: 905
Individual Paper

During the COVID-19 pandemic, cities across the U.S. were forced to adapt rapidly to the novel public health
disruption. Those regulations that affect the use of public space and specifically the right-of-way dramatically
shifted during the pandemic. Transportation and the food system were two heavily impacted systems.
Transportation patterns changed due to stay at home orders and work from home policies, more outdoor dining
and pick-up and loading zones were accommodated, and farmer’s markets required larger spaces for their
operations in streets and parking lots. In sum, the COVID-19 pandemic and its aftermath marked a significant shift
in how the right-of-way and other public spaces were used (Gregg et al. 2022). In response, city planners were
forced to think through strategies for supporting businesses, especially restaurants and other food businesses who
struggled to retain customers while also offering a necessary public function. Strategies included altering policies
related to public and private space usage and exercising greater autonomy and discretion in decision-making and
policy change. Using the food system as a lens, we explore the ways in which both the regulatory and physical
environments shaped the food system’s use of the right-of-way during this time of disruption.

In this research, we build upon the work of urban theorist Stanford Anderson (1978) who observed that within an
urban environment, there are physical constraints on what activities can or cannot be supported as well as socio-
cultural constraints that limit how the physical environment is used. Anderson defines the unrealized gap between
the opportunities offered by the physical environment and the activities that actually take place within it as latent
potential. Resilience, to Anderson, is the combination of the realized and unrealized potential in the built
environment. During the pandemic, novel uses of the physical environment were exploited, illustrating Anderson’s
concept of latent potential. While it is clear physical and socio-cultural constraints impact the adaptability of the built environment, regulations must also be taken into account. For example, Emily Talen (2012) argues that the pattern, use, and form of our urban spaces are explicitly shaped by our regulations and ordinances, thus the regulatory environment must be examined if one is to understand where latency, and therefore resilience, exists in the urban environment.

Using a comparative case study to understand how the shifts in regulations affected public space usage during the COVID-19 pandemic, we examine changes in right-of-way usage that occurred during the pandemic. Comparing study communities in Tempe, Arizona and Seattle, Washington, we review and compare plans and policies and conduct in-depth interviews with city staff and food-business owners. From this comparison, we offer insight into how different policy environments and urban forms contribute to resilience in disruption. We conclude with policy recommendations that decision makers can employ as strategies for increasing resilience in their own cities.

Citations


Key Words: urban design, food systems, right-of-way, resilience, adaptability

10-MINUTE NEIGHBORHOODS: AN INCLUSIVE COMMUNITY-CENTERED APPROACH BASED ON SOCIAL NEED

Abstract ID: 918

Individual Paper

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In inclusive, equitable and desirable communities, access to goods, services, and amenities such as shopping, care, learning, culture, and recreation should be within easy reach of all residents. Recently, there has been a shift providing these amenities close to where people live, evident in the numerous proximity models for creating 20-, 15-, or 10-minute neighborhoods (see, for example, Moreno, et al., 2021) in lieu of providing better and more efficient mobility to reach these amenities (Proffitt et al., 2015). However there remains a significant gap between the concept and its actual implementation, especially as it relates to individual and community traits, capacities, and limitations resulting from socio-economic circumstances, individual health, perception of safety, and sense of community and belonging. Crucial reasons are, 1) the current ways to measure proximity often render the concept a mere city branding device rather than providing inclusive, equitable, and accessible services to all city residents (Gower and Grodach 2022), and 2) that the existing proximity-based models (Weng et al. 2019; Da Silva, King, and Lemar 2020; Moreno, et al., 2021) do not account for community differences. In essence, current methods and proximity models are not customized to the specific needs, strengths, and challenges of individual communities and do not provide them ways to prioritize their access to certain amenities over others. This paper is aimed at addressing these shortcomings by assessing unique communities’ needs for walkable access to specific goods, services, and amenities, using a model that determines proximity in the context of social need.
In the past, our Proximity Matters study proposed a methodology to assess neighborhood-level proximity and social need to interpret community opportunities and challenges to walkable access to everyday needs for shopping, care, learning, culture, and recreation. This paper examines how to optimize proximity with specific neighborhood needs and support communities in identifying place-based, inclusive, human-centered, economically viable and sustainable options. Using Cincinnati as a case study, where proximity has been shaped by the city’s history and urban morphology, we examine if and how existing walkable proximity patterns correlate to socio-economic characteristics of the city’s neighborhoods and what specific strategies are needed for achieving walkable access to everyday goods, services, and amenities.

We use a unique one-acre hexagonal grid to geospatially model walkable proximity to everyday goods, services and amenities and correlate walkable proximity with specific differences in social needs of local populations, especially the underrepresented and those that have mobility constraints. This model is used to understand proximity patterns in all 52 neighborhoods of Cincinnati. Our findings reveal four place types – gap, opportunity, optimal and middle. Further we correlate these four place types to urban morphological patterns and demographic characteristics of the neighborhoods to generate a playbook to balance proximity with neighborhood characteristics and social needs. The findings of this paper advance existing theoretical constructs of proximity to real world practice and implementation in urban design and planning with a focus on inclusiveness.

Citations


Key Words: 10-minute neighborhood, inclusive access, proximity, walkability, amenities

ASSESSING THE POLITICS OF URBAN DESIGN THROUGH REZONING DOWNTOWN LOS ANGELES

Abstract ID: 989

Individual Paper

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This paper examines the process of negotiation to implement a modernized zoning code through the Downtown Los Angeles Community Plan Update “DTLA 2040.” While the City’s new zoning code developed design and planning tools for a streamlined process and improved public realm, downtown communities began mobilizing coalitions of knowledge and expertise to preemptively challenge and influence the plan. The problem of developing a citywide zoning framework, that can adapt responsively to local contexts, presents the political and planning tensions between centralized and decentralized control, and implementation through top-down versus bottom-up processes. Additionally, negotiating zoning changes with local community interests highlights the degree of flexibility between economic structural constraints and the agency of urban design tools to improve
and/or constrain local issues and conditions. Planning theory suggests that social mobilization can shift power to communities, however, the liberalization of state planning also devolves responsibility potentially exacerbating unequal local power dynamics. Zoning in the U.S. has evolved from technocratic tool to a political framework for negotiation. Within this context, the social production and negotiation of zoning tools reveals choices and preferences that help to understand these power dynamics. This research examines the politics and practices of zoning reform and implementation in Downtown Los Angeles to answer two questions: (1) How do community coalitions align resources and interests to influence community plan policies and zoning codes? (2) How are new urban design and planning tools used to frame the process and negotiate conflicting priorities between diverse stakeholders?

This case study provides in-depth analysis of political and professional decision-making at the intersection of top-down zoning reform and robust community mobilization. Content analysis and process tracing examine the iterative changes to the community plan policies, zoning codes, and public comments to track the decision-making process from 2014 to 2023. Semi-structured interviews and observation of planning meetings are used to focus analysis on the negotiations around two design and planning tools from 2019 to 2023. Specifically, a new hybrid zoning framework based on urban design tools is combined with an incentive zoning system for developers to produce community benefits. Findings present how the tensions between financial viability and community benefits of development projects take shape differently across the historically marginalized communities of Chinatown, Little Tokyo, and Skid Row. Furthermore, it reveals how the assumptions and preferences of particular groups are prioritized over others and become encoded into the planning system. The research has implications for scholarship on the evolving understanding of urban regimes, and for practice in revealing how planners calculate and negotiate tools such as incentive base-bonus systems and inclusionary zoning policies.

Citations


Key Words: urban politics, zoning reform, community benefits

WHERE GREENS SPACES ARE EFFICIENT? EXPLORING GREEN OPEN SPACES ACCESSIBILITY BY NON-MOTORIZED TRANSIT MODES AND ANALYSIS OF STREET NETWORKS AROUND GREEN SPACES

Abstract ID: 1166
Individual Paper

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The presence of inequality in green spaces and park distribution in the Los Angeles region is described through academic literature and observed daily by its citizens. Meanwhile, a green spaces network can support mental and physical health, mitigate climate change, and make the urban environment resilient to high-temperature periods. A systematic distribution and access to green and natural areas are influential for constructing a sustainable and equitable built environment. Green spaces and parks integrated into walking and bicycling network pathways may
play a vital role in maintaining public health and well-being. The research aims to explore the physical and social characteristics of different clustering of green spaces in Los Angeles. What are the characteristics of an urban street network that provides high green public space access? What green open space patterns are most accessible by walking and cycling? What policies and urban design approaches can expand the green spaces network?

Based on open science principles, we utilize open data sources such as GIS Hub and Open Street Map (OSM) and use a network, spatial, and clustering analysis. The descriptive statistics show that an increase in green space per capita does not contribute to green space accessibility. The street network analysis identifies that the density of walking and bicycling network are strongly related. However, the high portion of the green spaces tends to locate outside the high and middle centrality of the same case studies neighborhoods, meaning underutilizing the street network for green distribution purposes.

Low-income and historically disadvantaged communities are more isolated from green spaces and parks. However, big-scale green spaces in high-income neighborhoods associate with low walking and bicycling access. Policies addressing green space distribution and micro-mobility infrastructure should consider intersections and co-benefits of green space accessibility, green transportation infrastructure, and environmental equity.

Citations


Key Words: green space, green infrastructure, bicycling, walk accessibility, street networks

**INSURGENT URBANISM: COUNTERING OTHERING THROUGH RIGHTS-BASED URBANISM**

Abstract ID: 1227

Individual Paper

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In a just city, all communities can participate in the life of the city and make decisions about how their built environments evolve. Designers and planners can support all communities using and enjoying everyday spaces. Despite these potentialities, people and places are regularly othered in many communities. This paper asks, what happens when othered communities embrace rights-based urbanism to aid the redevelopment of their property, especially in the face of gentrification and displacement? And secondly, how are their efforts helped or hindered by municipal policies and plans?

This paper investigates the practice of rights-based urbanism in Seattle, WA, in an in-depth, community-focused,
Practitioners focus on an urbanism of belonging--one of inclusion and self-determination that celebrates and supports the continuity and/or return of Black spaces in Seattle.

Earlier work examined how faith-based organizations, specifically Black churches, are developing a rights-based urbanism and how faith-based organizations play a new role in community-based redevelopment efforts to counter displacement. This paper builds on that work, using observations, interviews, and policy analysis, to examine the relationships and supportive scaffolding between local practices and the broader realms of policy and city making.

Local redevelopment efforts bridge the distance between vulnerabilities and favorable policy, programmatic, and spatial transformation. Efforts to support these transformations at the municipal level, such as the City of Seattle’s Religious Organization Owned Property Ordinance and Equitable Zoning Project, represent critical connections and scale jumps between those local practices and broader realms.

Of course, there are challenges to this process, including fragile/new networks, the need for funding and technical support, and the risk of special interest interference. Nonetheless, designers and planners can learn from this paper how people and places positively persist in their long-time communities by focusing on their right to the city and developing an urbanism of belonging. The audience will also understand how local efforts support and are supported by special zoning tools developed to support local community redevelopment actors in an environment of gentrification and displacement.

Citations


Key Words: equitable development, faith-based organizations, urban design, policy analysis

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Track 15 Research in Motion (RiM)

FIGHTING STUDENT OBESITY ON AAMU CAMPUS AND IMPROVING QUALITY OF LIFE FOR STUDENTS

Abstract ID: 99
Research in Motion (RiM)

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Obesity has been in the center of health planning for decades, however, the changing health and dietary guidelines over the years made it clear that healthy living, healthy eating habits, respect to cultural habits have more impacts on community’s and individual health. It is not the body mass index (BMI) that determines the state of health, but all the factors impacting healthy living that have an impact on a better community productivity, happiness and
health.

Having an active community is now premiering to replacing the trends for healthy cities where designing cities to help people to move becomes a priority.

Cities that make physical activity a priority, convert existing spaces into active spaces, and design environments for people to be active, will create legacy for physical activity. “Designed to Move, Active Cities”, p.4

To achieve a city’s ability to create a legacy for physical activity, many planning tools might be in place such: good design of pedestrian networks, integrated mobility systems that allow a safer modal split where people can walk, bike, ride, and have access to green infrastructure all along the way. Having well-designed pedestrian crossings, safe transfer between ride, bike and walk, transit-oriented development (TOD), safer cities for people and other planning concepts need to all work together. Modern trends are now calling for considering the community gardens, school gardens and urban agriculture as tools for achieving better physical activity for the city population. Away from increasing the supply of fruits and vegetables for the community, community and school gardens increase the awareness of the community, especially school children, about the value of biophilia on health and being physically active.

According to the NFS 2022 system map of obesity, it is impacted by:
limited safe pedestrian infrastructure & walkability,
less opportunity for physical activity,
limited access to green space and
limited access to community gardens and/or land.

University campuses can play a major role in achieving such physical activity awareness in their cities and disseminate this type of knowledge to the communities around them and for the next generations. University Gardens can also help educate students about health and its relationship to food and the movement system on campus.

This proposal is for making university campus safer and walkable and for the safe integration of modes of transportation on university campuses with the priority set on active walking and biking. Safe crossings and a transit-oriented planning are the main objective of the research paper. Method of inquiry will be to collate data from different university campuses about their mobility networks, analysis of the pedestrian system, bike lane network, campus gardens and the overall student space plan that can make students active.

Research, would require collecting, accumulating and analysis of on- and off-campus data sets for the student population, campus plans analysis and campus plan comparisons. the research is still in its first few months where pedestrian counters are being purchased and distributed around the campus of AAMU.

Citations

SUBURBAN SUSTAINABILITY: A SCENARIO-BASED EVALUATION OF HOUSEHOLDS’ DAILY TIME-SPACE COORDINATION IN LOW-DENSITY NEIGHBOURHOODS

Abstract ID: 377
Research in Motion (RIM)

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The purpose of this paper is to develop scenarios of households’ daily time-space coordination in suburban neighbourhoods and evaluate how planning and design interventions could facilitate transitions to more sustainable lifestyles, particularly interpreted to mean reductions in carbon footprints. We take a highly visual and storytelling approach to our research with the aim to not only evaluate lifestyles in an academic setting but also disseminate findings to a broader audience to help implement solutions. The purpose is to imagine alternative suburban futures to the now arguably hegemonic (at least in planning circles) sustainability as density approach.

Planning for sustainability, to achieve carbon reductions, is applied in planning practice largely through high-density, mixed-use, transit-oriented development. Plans emphasize major nodes and corridors as the main sites for planning intervention, often proposing increases in density in the form of high-rise development. This approach, what some call “sustainability as density” (Quastel et al., 2012), is meant to facilitate lower car use and carbon footprint.

However, high-density development is not likely a silver bullet for promoting sustainability in North America with over 70% of people living in lower density suburban settings (Jarvis, 2003; Charmes and Keil, 2015) This is because the “sustainability as density” approach has been associated with challenges such as, gentrification and displacement, affordability concerns, difficulty building units suitable to larger households, and in some cases, attracting high earners who bring more cars to urban settings. Furthermore, the focus on nodes and corridors has arguably done little to bring a larger share of the existing suburban population to reside in neighbourhoods with densities that would support transit, walking and cycling. Densification cannot likely unfold fast enough, or be implemented without significant intervention, to facilitate carbon reductions in existing suburban neighbourhoods ([...], 2017).

In this paper we thus build on an alternative (and simultaneously complementary) imaginary that accepts that a majority of the North American population lives in relatively low-density neighbourhoods. This requires us to ask what approaches exist and can be imagined to exist to increase sustainability for existing built-up areas in the suburbs. Our methods include a review of alternative approaches to suburban sustainability in the academic and policy literature as well as scenario-building approaches to develop parameters around feasibility. We illustrate findings largely in a visual manner but also through systematic documentation of scenario building processes.

Overall, we find that key to finding solutions to suburban sustainability, in addition to the sustainability as density approach in nodes and corridors, is an understanding of the actual lived experiences (and time-space coordination) of households residing in lower-density neighbourhoods (Jarvis, 2003). We draw on cases from feminist urban studies that discuss domestic mobility for families with children and working mothers (e.g., Gilow 2020, and Jarvis 2003). We create scenarios of the household’s daily routine based on a diversity of previously documented
suburban lifestyles. This includes travel behaviours related to employment, child care (or other forms of care), leisure, and daily household needs, as well as land use and housing characteristics of neighbourhoods that can be leveraged to add ‘gentle’ density and facilitate more localized lifestyles through suburban agriculture, localized amenities and community networks, and working from home.

Focusing on households’ everyday decision-making around time and space coordination helps reveal linkages among morphology, proximity, and lifestyles; while, focusing on existing land use and housing characteristics helps identify opportunities for altering existing suburban landscapes. The results of this study help identify future design and policy interventions which encourage a sustainable lifestyle within existing suburbs by emphasizing community building and modifications to existing built and neighbourhood structures.

Citations


Key Words: low density housing, sustainability, time-space coordination, domestic mobility, visual analysis

ANYPLACE ARCHITECTURE: A NATIONAL SURVEY OF SAMENESS AND DIFFERENCE IN 5-OVER-1 APARTMENT DESIGN

Abstract ID: 496
Research in Motion (RiM)

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The proliferation of “5-over-1” apartment buildings across the United States during the past decade has been praised for providing much needed housing, but also criticized as monotonous, placeless and formulaic (Kode, 2023; Lefkowitz, 2021; Nishimura, 2022). Also called “podium” apartments, these buildings stack repetitive floors of wood frame units over a concrete base of parking and retail, and are characterized by bulky massing, long street walls and flat facades with haphazard surface decoration, alternately described as boring, chaotic or simply ugly. Critics deride them as fast-casual architecture, gentrification buildings and even architectural plague, all built in developer chic, low modern or Sketch Up contemporary. These “blandmarks,” it seems, are “everywhere, but look like they could be anywhere” (Nishimura, 2022).

Why do so many new podium apartments built in locations as disparate as Denver, Nashville and Seattle look the same (Kode, 2023)? Explanations from those in the industry abound. Developers cite rising land, material and labor costs, but also say that location, massing and architectural style is driven by restrictive local planning and zoning codes. Architects identify bare bones budgets that require the use of low quality materials and inherently risk averse developer clients, but also the International Building Code, used by most US jurisdictions, which enables the hybrid 5-over-1 structural type. And planners recognize that even this comparatively cheap mode of construction is costly, encouraging fully built out sites that maximize density and discouraging experimentation that might require discretionary approval. All note the anodyne effects of the high returns required by institutional capital and the consequences of consolidation in the building industry, meaning most housing is constructed by national, not local,
actors (Lefkowitz, 2021). In other words, housing homogeneity comes down to codes, costs, clients and capital. But, which codes, costs, clients and capital are the most homogenizing? And how are they working to dampen regional character and place identity? To better understand their role in standardizing housing practice, this project proposes a survey of podium apartments built in the past five years by the five largest real estate developers by unit volume as assessed by the National Multiunit Housing Council. From this survey, specific buildings will be selected for a deeper comparative case study, based on their level of physical similarity and location in contrasting, fast-growing metropolitan areas. Chosen buildings will be compared to one another cross-city, but also with in-city examples of local development if possible. Data collected on each case will include drawings, renderings and photos to evaluate project design, planning and zoning code parameters, design guidelines, applications for discretionary approval, and design review requirements to assess planning context, and ownership information, land and construction costs as well as rental and cap rates to appraise the real estate development and investment environment. The study will use these materials to ask:

1. How similar or different are these buildings from an architectural perspective? Do they exhibit the degree of sameness across multiple locations as alleged by their critics?
2. What are the urban planning, real estate development and political forces shaping these specific physical outcomes? Are they those cited by industry players or are other forces at work? Of the forces involved, which work to create the most similarity, which might be used to create difference?

By answering these questions the study hopes to provide data that could ground a deeper conversation about this kind of “anywhere architecture,” and ask whether the current proliferation of podium apartments is really any different than housing shortages in the past, which were also addressed with repetition and sameness.

Citations


Key Words: Housing, Urban Design, Real Estate Development, Place

PREPARING FOR FUTURE PANDEMIC: IMPACT OF PANDEMIC ON PARK VISITATION IN SEOUL, SOUTH KOREA - SPATIAL PANEL DATA ANALYSIS
Abstract ID: 512
Research in Motion (RiM)

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While lockdown or staying at home was a powerful way to protect us from transmission during the COVID-19 pandemic, the lack of outdoor activity also caused other serious health problems, particularly depression and anxiety. Unfortunately, previous studies predicted that epidemics are expected to occur every five to ten years, and environmental changes due to climate change would accelerate and exacerbate them.

In these days of a near-perfect return to our pre-COVID-19 life, we need to think about future epidemic based on
our experiences. In preparation for future pandemics, it is important to promote mental health by providing safe places for citizens to engage in outdoor activities near their homes. In an epidemic resilient landscape plan, open spaces must be adequately distributed and sized to accommodate both residents and visitors while maintaining social distancing. For that, it is necessary to analyze the open spaces that people prefer during the pandemic.

Against this backdrop, this study aims to investigate the locational and spatial characteristics of open spaces preferred by people during the COVID-19 pandemic in context of a mega city, with specific focus on Seoul, South Korea. For statistical analysis, this study employs a spatial panel random effect model using big data. Data used in this study include active population data from September 2019 to November 2021 provided by SKT Geovision and environmental data of digital maps provided by National Geographic Information Institute. As for the expected result, compared to before COVID-19, open spaces in residential areas are expected to be preferred in terms of location, and waterfront open spaces are expected to be preferred in terms of space.

The findings of this study suggest implications for urban landscape design and planning. Designers, planners and policy makers can benefit from this study when developing the pandemic resilient landscape planning and design guidelines. By implementing this finding in cities, citizens will live healthier physically and mentally, not only during a pandemic, but also on a regular basis.

Citations


Key Words: resilient landscape planning, pandemic, open spaces

TOWARDS AN ACTIVE LIVING ENVIRONMENT: EVALUATING THE IMPACT OF STREAM DAYLIGHTING ON PEDESTRIAN NETWORKS IN ZURICH, SWITZERLAND

Abstract ID: 590
Research in Motion (RiM)

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Urban water features, particularly rivers and streams, impact the lateral socio-spatial connections within cities (Kondlof & Pinto, 2017). Rarely discussed, burying streams in underground culverts paved the way to twentieth century rapid urbanization that overcame lateral barriers. Zürich, Switzerland, has been reversing these decisions since 1988 with its “Bächkonzept” (daylighting) policy and, so far, have uncovered nearly twenty kilometers of culverted streams. This policy originally sought to reduce the cost of sewerage treatment by reducing the volume of rainwater runoff entering the wastewater treatment plans (Marsalek 2005). A cascading benefit of stream daylighting has been improved recreation opportunities and habitat restoration, while providing an attractive...
contribution to the built environment (Marsalek 2005). These benefits suggest stream daylighting can support the development of an ‘active living environment’ (ALE) by improving the natural and built properties of neighbourhoods to support active living (Tobin et al 2022). Traditionally, urban streams may have been considered barriers to lateral movement, thus having a negative influence on walkability. To gain an understanding of stream daylighting’s impact on the production of an ALE, this paper investigates how daylighting urban streams in Zürich impacts route connectivity for walkability. This paper answers the question: how do daylighted urban streams contribute to ALE, although they can be considered barriers to lateral movement?

We evaluate pedestrian route network connectivity as a primary element of urban morphology that impacts pedestrian movement. This is done using metric reach and directional reach as measures of connectivity that incorporate Space Syntax and are computed in a GIS platform (see Ozbil et al. 2011). These measures are used to conduct a route network analysis within a defined radius of select stream daylighting sites. To facilitate such a study, we digitized waterways and road centerlines from georeferenced historic maps of Zürich from 1881 (before the culverting of streams) and from 1984 (after culverting, but before daylighting). We compare these maps to the 2020 open access spatial data for the City of Zürich (post daylighting). We augment our study with photography for purposes of either complementarity (new interpretations of the GIS data) or convergence (affirmations of the GIS analyses) (see Gaber & Gaber 2004). A dimension of our use of photography entails historic and contemporary geo-coded characteristics of the daylighted streams and their contexts to identify change over time for microscale walkability.

Our initial findings reveal that the daylighted streams do not negatively impact connectivity and are associated with positive urban design changes that support the creation of an ALE. Specifically, our comparison of the 1984 (pre-daylighting) and 2020 (post-daylighting) maps reveals that where streams have been daylighted there is either no change in the level of connectivity or there are increased lateral connections (i.e., more bridges and footbridges) throughout the city. In terms of research methods, our combination of historic and contemporary photography with spatial analysis methods adds nuance to the latter. Together, these methods provide a better perspective of the impacts of the streams’ loss and their subsequent daylighting on urban form and on the human experience of the urban landscape, including walkability and safety from flooding events. Finally, our research contributes to planning practice by revealing that stream daylighting positively impacts ALE by creating an urban environment that is conducive to physical activity, balancing connectivity with aesthetic appeal. Indeed, the daylighted streams are integrated within the daily experiences of Zürich’s residents, present in school yards and parks, and meandering through residential buildings, along park footpaths, and sidewalks as features that positively contribute to the urban spaces.

Citations

INFLUENCE OF RIVERFRONT DESIGNS ON CITIZEN'S BEHAVIOR: FOCUSING IN CHEONGGYEcheon RIVER IN SEOUL, SOUTH KOREA
Abstract ID: 732
Research in Motion (RiM)

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As technology has evolved and buildings have gotten more comfortable, people have been spending more time indoors, resulting in public health challenges such as stress-related mental and physical sickness. To offset this trend, cities have increased the number of natural places to improve the quality of life for their residents and make metropolitan areas more attractive. However, researchers assert that these areas are not frequented by many individuals. Numerous studies have explored the behavior of residents in public locations, but few have examined urban blue-spaces, notably rivers. Although riverside designs vary greatly, little is known about how people act in them. This study seeks to address two questions: first, if variances in riverside design affect citizens' activities, and second, how riverfront affordances change during the day. In order to answer these concerns, literature analysis was done to identify the various riverside designs, the affordances of a riverfront, and the evaluation criteria for the performance of each design. Afterwards, data were obtained via audit field excursions and direct citizen activity observations. Finally, multiple regression analysis is employed to examine the relationships between riverside design and observed activities during a one-month period, both at lunchtime and work leaving time. This study is undertaken on the Cheonggyecheon riverfront in South Korea, a flagship project for urban river revitalization worldwide that also flows through one of Seoul most important commercial areas. Humans typically view the city as a remote location from natural processes. With the expansion of cities into more natural areas and the rehabilitation of urban natural spaces, this disparity is lessening. Citizens who have experienced buried or inaccessible rivers have witnessed the greening of towns and the transformation of rivers into gathering areas. Therefore, further research is required to help us comprehend, complement, and enhance the relationship between urban rivers and public health and their engagement with inhabitants. The anticipated outcome of this study is to establish whether alterations to riverfront design have a direct impact on the variety of observed activities. Consequently, this research is expected to contribute to guiding the creation of future urban river designs that increase human-nature interactions, promote resilience in cities, and stimulate additional research about urban blue spaces.

Citations


Key Words: affordance, riverfront design, human-nature interaction, public health, public-space performance
PROPERTIES OF URBAN CRISIS: URBAN DESIGN, PROPERTY, AND CLIMATE ADAPTATION

Abstract ID: 916
Research in Motion (RiM)

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Spatial property regimes - the institutions governing relationships between people with respect to space - profoundly shape the form and experience of urban environments. Property regimes govern who can access, use, build upon, and profit from urban space. As such, property regimes affect who is impacted by climate change and other crises. However, the role of property in shaping urban design generally and climate adaptive urbanism more specifically is poorly understood and under-theorized.

This research addresses three related questions. First, how does urban design scholarship engage spatial property regimes? Second, to what extent do existing frameworks for understanding property enable or constrain urban design responses to climate change? And finally, how might urban designers critically engage with property regimes to advance transformative climate adaptation?

To address these questions, I first review diverse urban design literatures to describe three distinct modes in which scholars directly engage spatial property. First, morphological researchers trace the role of parcel size and configuration in shaping urban form (e.g., Conzen 1960; Moudon 1986). Second, researchers examine how fragmentation and integration of property ownership shapes the experience of places (e.g., Sternberg 2000; Ryan 2017). Finally, equity and justice-centered research assesses how property regimes shape social and political life and the distribution of place-based amenities and harms, often seeking to counter forms of socio-spatial marginalization, including those rooted in gendered and racialized biases (e.g. Hayden 1985; Griffin, Cohen, and Maddox 2015; Goh, Mukhija, and Loukaitou-Sideris 2022).

Next, I draw on global case studies to trace how these three existing treatments of spatial property regimes in urban design scholarship relate to ongoing debates on adaptation to uneven climate change hazards, focusing on three primary “difficulties” of dominant property regimes with respect to climate change adaptation. First: where dominant property regimes are static, adaptation requires flexibility and change. Second, where property regimes are frequently fragmented and individualizing, adaptation requires collective action. Finally, where property is often treated as a neutral legal structure, just adaptation will require redressing past and ongoing structural injustices. I examine how contemporary urban design research and practice engages each of these difficulties.

The paper closes by drawing on recent design research in the San Francisco Bay Area to propose a framework for action-oriented urban design research to more critically examine the role of property regimes in shaping urban life and the uneven burdens of climate change and adaptation.

This paper is part of a larger collaborative project called Governing Land on a Dynamic Earth (GLADE), which provides a framework for examining the role of property regimes in shaping climate change adaptation. The GLADE framework crosses sub-disciplinary boundaries, uniting scholarship from urban climate governance, hazards planning, and urban design. This paper develops the urban design component of the larger research project, advancing an action-oriented research framework addressing the linked crises of urban inequality and climate change vulnerability.

Citations

PLACE-MAKING IN IMMIGRANT ECONOMIC DISTRICTS: SHOPPING CENTERS IN SUBURBAN ATLANTA

Abstract ID: 950
Research in Motion (RiM)

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Immigrant place-making in the North American context is exemplified in neighborhood ethnic enclaves and districts such as Chinatowns and Little Italies nestled in the heart of large metropolitan cities. Ethnic enclaves have provided refuge and economic opportunity for many immigrants over decades. They have evolved as a distinct stage for discourse on the contested city, the successes and limitations of incentives in steering housing and commercial development, and the evolution of cultural place semiotics. Immigrant settlements are not restricted to the city but also nucleate in suburbs, creating ‘ethnoburbs’.

In the suburbs, smaller shopping centers (strip malls, shopping plazas) are a rising typology in ethnic economic place-making that displays a different – and more recent – negotiation between cultural practices and planning norms to promote economic opportunity. Informed by challenges experienced in more established ethnic enclaves, the ongoing production of place in shopping centers can shed light on how to mitigate upcoming conflicts and leverage international insight into urban design to create a rich urban environment.

The research question this paper addresses is: Which practices in place-making can inform inclusive planning approaches to ensure the viability of ethnic shopping centers? How can these practices be translated into best practices in urban design and regulation?

This paper examines three small-scale commercial centers in the suburbs of Atlanta, GA (Buford, Duluth, and Lawrenceville) that house Asian and South American economic establishments, focusing on the following:

1. The interpretation of urban form by business owners and shoppers such as the use of internal sidewalks for displaying merchandise, multilingual signage, and adoption of architectural elements to communicate culture.
2. Patterns of ownership and rent, and the degree of autonomy business owners possess to alter space uses and space design.
3. Zoning and code limitations that enable or limit place-making in small shopping centers.

The methods for this exploratory qualitative study include 1) field surveys to document the spatial layout and use, and visual interpretations of these findings; 2) Semi-structured interviews with business owners.

Citations

BRIDGING THE GAP BETWEEN VULNERABLE COMMUNITIES ON THE MISSISSIPPI COAST AND RESILIENT DESIGN

Abstract ID: 965
Research in Motion (RIM)

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Mississippi’s coastal cities are highly vulnerable to the effects of climate change, including sea level rise, coastal erosion, and natural disasters. This area especially has experienced spatial segregation separating the rich who have second or vacation homes on the coast from young and minority communities residing in the back-bay region. This research answers how the community-engaged planning process affects a future resilient coastal design and addresses the current social and environmental problems, explicitly targeting Mississippi’s coastal areas and vulnerable communities.

This research is composed of three parts: 1) spatial analysis to diagnose the environmentally and socially vulnerable region along the Mississippi coast, 2) a community-engaged planning process of various public meetings and design charrettes, and 3) urban design proposals to find site-specific local solutions for a more resilient Gulf Coast. The map analysis and literature review include collecting public GIS data and constructing output maps to present specific local issues. This process assists in understanding complex regional issues and utilizes spatial analytical techniques to address current planning issues in the Gulf Coast area. Through integrated spatial analysis, this research identifies vulnerable coastal areas and shares spatial analyses with local communities and city governments, helping to better prepare for the future. Through the community-engaged resilient design process, this research finds the gaps which the map analysis and literature review could not discover. First, this study can inquire about particular needs and identify possible solutions during design charrettes with local community members. Although the thoughts and opinions of community members vary, some degree of consensus has been reached through discussion. In addition, these processes increase the understanding and satisfaction of the final design among the community members. Second, the community-engaged planning process is also beneficial for local communities. By participating in the urban design process, local people can discover that there can be spatial solutions to specific problems, and they can participate in improving their environment through design. Residents can openly express their opinions about issues, seek answers, and eventually develop ideas for use by the local government. This research pursues a resilient spatial design with a particular focus on future climate change-related issues along the Gulf Coast. The proposed spatial designs from the community-engaged resilient design process address complex local problems, including natural disasters, rising sea levels, beach erosion, economic decline, the lack of green space, spatial segregation, wildlife habitats, and so on, to solve local issues and facilitate a better future in Mississippi.

The participation of city government and local communities in the urban design process bridges the gap between vulnerable coastal communities and resilient design education and research. The spatial design process should include field research and close communication with locals and analyze specific regional issues (e.g., environmental, socio-cultural, and economic) and vulnerable communities. This research on climate-adaptive planning and resilient design adds significant meaning to the “resilience through design” trend on the Gulf Coast. It is helping to build a stronger relationship with coastal communities in Mississippi. I hope this study assists in developing a new pedagogy for use in the resilient design process to be more practical and site-specific, thus
better for meeting local needs and addressing unique environmental conditions.

Citations


Key Words: community-engaged design, community-learning, urban resilience, climate change, Gulf Coast

THE RELATIONSHIP BETWEEN THE PARK ACCESSIBILITY AND PREFERENCES: A CASE STUDY OF SEOUL, SOUTH KOREA

Abstract ID: 1193
Research in Motion (RiM)

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Parks visits are known to promote physical and psychological health. Therefore, it is important to understand the factors that encourage their visits for the planning and management of urban parks. Among these, park’s accessibility has a great influence on parks visits. Many researchers have analyzed the effects of the accessibility, considering the number of transportation facilities - bus stops and subway stations - Euclidean or network distances to the parks, or the number of populations near the parks within walkable, usually 10-min, distance (Zhang & Zhou, 2018; Williams et al., 2020). Spatial quality measured in more intimate level, or walkability, however, has not been frequently assessed. The environment of the routes to the parks, for example, level of street greenery, sidewalk width, sidewalk slope, visual quality of the scenery perceived by a person could indeed alter the pattern of the park preference, hence the changed the usage of the parks (Li et al., 2023; Lu et al., 2018). Street View (SV) images have emerged as an alternative data source to extract perceived streetscape environmental features of urban spaces (Liu et al., 2023b). Especially, Google Street View (GSV) images can accurately represent the general resident’s perception of street greenery (Lu et al., 2018). So, GSV analysis with deep learning allow us to analyze the parks accessibility considering the walking environment of the routes to the parks from the resident’s perception.

In this backdrop, this study aims to analyze the preference to the parks based on the accessibility, including walking environment. We hypothesize that as the better walking environment of the routes to the parks, the number of visitors would increase. The study site is Seoul, where there are the largest number of neighborhood parks in the South Korea. We limit the sample to the small-size neighborhood parks located within neighborhood areas that are installed by planning regulations. We use GSV images to conduct semantic segmentation using DeepLab-v3+, a state-of-the-art neural network with high accuracy. (Li et al., 2023) Through this, it is possible to analyze the walking environment of the routes to the parks in detail by calculating the level of street greenery and openness, etc. Information on the visits is provided by a telecommunication company (SK Telecom Geovision). We subdivide the park user groups into two by the purpose of the visits; conducting exercises and the rest. The results
of this study will help to analyze the utilization rate of the park and the equity in access to green areas by region from the perspective of pedestrians more precisely and can contribute to the effective land use of Seoul.

Citations


Key Words: Urban park, Accessibility, Google Street View, Walking environment, Street greenery
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